1998. The Journal of Arachnology 26:149–189

SALTICIDAE OF THE PACIFIC ISLANDS. III. DISTRIBUTION OF SEVEN GENERA WITH DESCRIPTIONS OF NINETEEN NEW SPECIES AND TWO NEW GENERA

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ABSTRACT. This is the third paper in a series on the jumping spiders (Araneae, Salticidae) of the Pacific Islands. It includes the genera *Cytaea, Hasarius, Menemerus, Pseudicius, Sobasina,* and the new genera *Lakarobius* and *Xenocytaea.* It describes 19 new species: *Cytaea carolinensis, C. koronivia, C. nausori, C. ponapensis, C. rai* and *C. vitiensis*; *Lakarobius alboniger*; *Sobasina aspinosa, S. coriacea, S. cutleri, S. magna, S. platypoda, S. yapensis* and *S. paradoxa*; *Xenocytaea daviesae, X. triramosa, X. anomala, X. maddisoni* and *X. zabkai. Pseudicius samoaensis* is synonymized with *P. kraussi.* A key to the species of *Sobasina* is provided. Types of all new species are deposited in the Bishop Museum (BPBM) in Honolulu, Hawaii, except for *S. cutleri* which is in the American Museum of Natural History in New York.

This is the third paper in a series on the jumping spiders (Araneae, Salticidae) of the Pacific Islands (see Berry, Beatty & Prószyński 1996, 1997) and the last to describe new taxa. The genera included here are *Cytaea* Keyserling 1882, *Hasarius* Simon 1871, *Menemerus* Simon 1868, *Pseudicius* Simon 1885, *Sobasina* Simon 1898 and the new genera ***Lakarobius*** and ***Xenocytaea***. Nineteen new species are described: ***Cytaea carolinensis***, ***C. koronivia***, ***C. nausori***, ***C. ponapensis***, ***C. rai***, ***C. vitiensis***, ***Lakarobius alboniger***, ***Sobasina aspinosa***, ***S. coriacea***, ***S. cutleri***, ***S. magna***, ***S. platypoda***, ***S. yapensis*** and ***S. paradoxa***; and ***Xenocytaea anomala***, ***X. daviesae***, ***X. maddisoni***, ***X. triramosa*** and ***X. zabkai***.

The newly described species are from the Caroline Islands (Palau, Ponape, Truk and Yap), Fiji and Tonga. Almost all of them are known at present from single islands or compact groups of islands. The genus *Cytaea* is found from Burma and the Philippines through Indonesia and Melanesia to Australia, Fiji and Samoa. It has not previously been recorded from Micronesia. *Sobasina,* previously known only from central Melanesia (Wanless 1978), is newly recorded from the Caroline Islands, Fiji and Tonga. The genus *Pseudicius* is widespread and known from all zoogeographic regions of the Old World. Two genera, *Hasarius* and *Menemerus,* are each represented by a single well-known pantropical to nearly cosmopolitan species. Both have been described and illustrated repeatedly (e.g., Davis & Żabka 1989), and we give only new distribution records.

Some justification is needed for the description of the new genera *Lakarobius* and *Xenocytaea* "in a family which is almost certainly overloaded with generic synonyms" (Wanless 1984) and "given the overabundance of obscure genera in salticids" (Maddison 1996). An exhaustive literature search through about 150 described genera of salticids, including all those from Australia and the whole tropical Pacific, has not turned up any genus into which these species would fit. There seems to be no alternative to describing new genera under this circumstance. We have been unable, however, to examine specimens of all of the described genera. It is possible that some lesser known genus might turn out to be synonymous with either *Xenocytaea* or *Lakarobius.*

At first we intended to place these species in *Cytaea* because of their similarity in palpal structure. However, the palps of *Cytaea,* as is often the case with the relatively simple palps of many salticids, are not really distinctive. They are rather closely matched in other genera such as *Ascyltus* Karsch 1878, *Canama* Simon 1903, *Euryattus* Thorell 1881 and *Servaea* Simon 1887. The epigyna of most of the species of *Xenocytaea* (except *anomala*) are of an entirely different form from those in *Cytaea.* In *Cytaea* the retromarginal cheliceral tooth is broad, with a crescentic distal margin; in *Xenocytaea* (except *anomala*) it is narrow and bifurcate distally. The cheliceral promargin in *Cytaea* has four to five teeth, in *Xenocytaea* only two. There are differences in the leg spination between the two genera. For example, *Cytaea* has 3–3 ventral spines on tibia I, *Xenocytaea* has 2–2 (except, again for *anomala*). The color pattern characteristic of most *Cytaea,* especially that of the male, does not occur in *Xenocytaea.* The four-cusped retromarginal cheliceral tooth, absence of lateral spines from metatarsus I and non ant-like form distinguish *Lakarobius* from all other salticid genera in the entire tropical Pacific and Australia.

The collections on which this paper is based were mostly made by J.W. Berry, E.R. Berry, and J.A. Beatty (indicated as JWB, ERB, and JAB in the text) in a series of collecting trips: Marshall Islands (1968, three months; 1969, three months); Palau (1973, six months); Guam, Yap, Truk, Ponape, Taiwan (1973, 1–2 weeks each); Yap (1980, six months); Marquesas, Tuamotu, Society, Cook and Fiji Islands (1987, six months total); and Hawaii (1995, 1997, 1998, three months). Specimens were borrowed from the Bishop Museum (BPBM) and the American Museum of Natural History (AMNH) and are occasionally referred to. The generic diagnoses are intended to distinguish only among salticid genera reported from the Pacific Islands (Micronesia and Polynesia), excluding the large islands near Asia and Australia, the sub-Antarctic and the eastern Pacific Islands. In the descriptions, genera are categorized by size as follows: small, 2–4 mm total length; medium, >4–8 mm; large, >8–16 mm; and very large, over 16 mm. All measurements are in millimeters. Illustrations of male palpi are of the left palp unless otherwise stated. Ventral leg spination is described as two longitudinal spine rows, the outer row given first, e.g., 5–4 indicates 5 spines in the outer row and 4 spines in the inner row, 3 to 5–4 to 6 gives the range of variation in each row, outer row first.

The holotypes of all new species are deposited in the Bishop Museum (BPBM) (State Museum of Hawaii) in Honolulu, except that of *Sobasina cutleri,* which is in the AMNH. Representatives of some of the species will be deposited in the U.S. National Museum (Washington) and the Florida State Collection of Arthropods (Gainesville). All adult specimens are paratypes unless specifically excluded in the text; juveniles are not paratypes.

Genus *Cytaea* Keyserling 1882

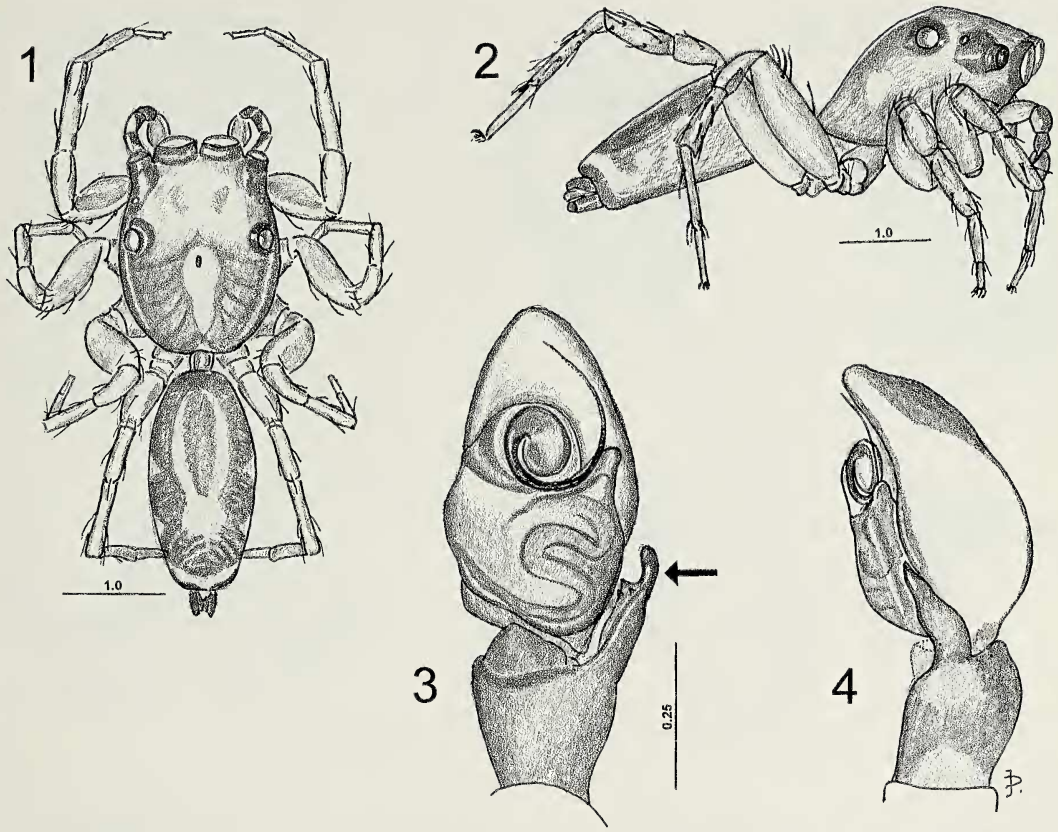
Type species *Cytaea alburna* Keyserling 1882. Syntypes from Australia in Zool. Staatsinst. und Zool. Mus. Hamburg.

Discussion—. This genus contains 30 described species known from the Philippines and southeast Asia to Australia and Samoa. It has not been reported previously from Micronesia. It resembles the other genera in Simon's (1903) Cytaeae and Servaeae in a number of respects, but is clearly distinguished from them by the characters given in the diagnosis. Simon described the Cytaeae as scarcely differing from the Hasarieae except by having more than two promarginal cheliceral teeth, but some features of the cytaeine leg spination differ from the spination in *Hasarius.*

Diagnosis.—Retromargin of chelicera with a two-cusp tooth, the cusps of equal size, promargin with 3 to 6 (usually 4 to 5) teeth. All tibiae, patellae and metatarsi normally with lateral spines; rarely metatarsus I lacks them. Tibiae each with a dorsal spine near base, sometimes lacking on tibiae I and II.

The only similar genera in the entire Pacific are *Ascyltus, Euryattus* and *Servaea,* only the first of which occurs in the area considered here. Males of all three of these have the tibia of the palp 1.25–4× as long as wide. In *Cytaea* both tibia and patella are very short, as wide as long or wider. *Ascyltus* has anterolateral patches of iridescent scales on the carapace, lacking in *Cytaea.* The epigynal septum of *Servaea* is much wider than that of *Cytaea.* The epigynal fossa of *Euryattus* has an internal sclerotized pouch, extending forward from its anterior margin, that of *Cytaea* does not.

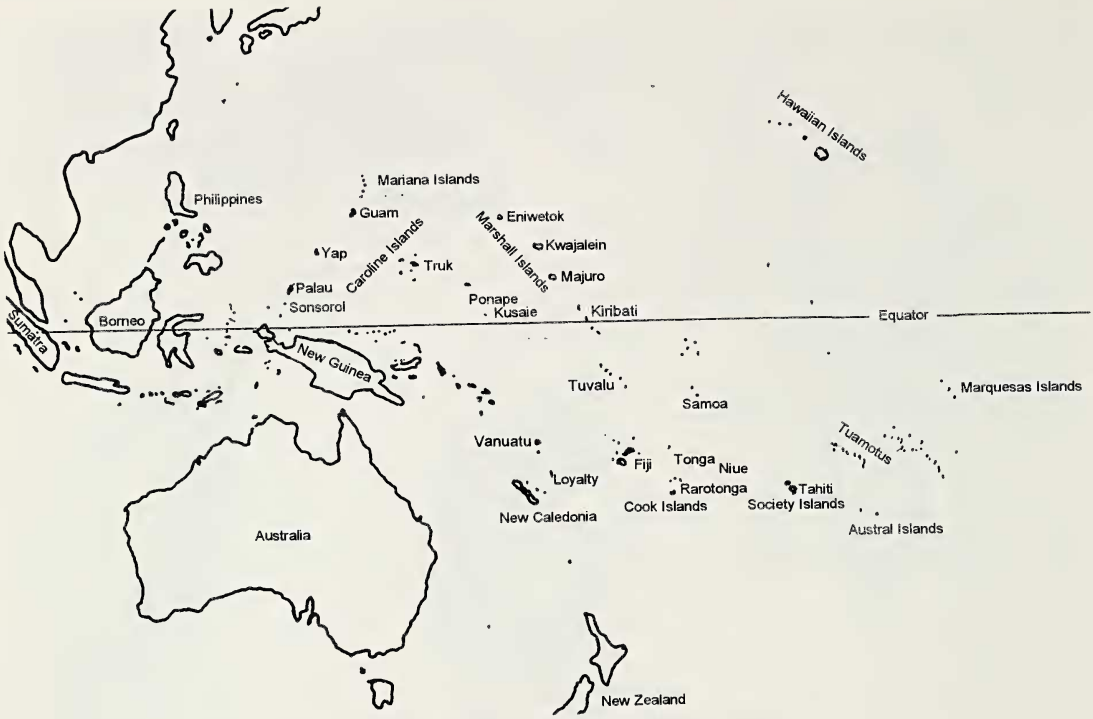
Descriptive notes.—Fissident salticids



Figures 1–4.—*Cytaea piscula* from American Samoa. 1, General appearance of male; 2, Lateral view of male; 3, Palp ventrally, with arrow indicating distal notch; 4, Palp laterally.

with cephalothorax high, not widened anteriorly, cephalic region nearly flat; thoracic groove present; ocular region equal in length to thoracic region or somewhat shorter. Ocular quadrangle parallel-sided, wider than long. Anterior eye row straight or slightly recurved, eyes equidistant; ALE diameter half that of AME. Second eye row halfway between first and third rows. PLE large, located about their diameter from the PME. Posterior slope of thoracic region gradual. Clypeus and base of chelicerae densely hairy. Chelicerae small in both sexes, with 3 to 6 (usually 4 or 5) promarginal teeth and one retromarginal tooth with two cusps. Sternum ovate, broadly truncate anteriorly. First coxae separated by the width of the labium or more. Labium longer than wide. Leg formula III=IV-I-II. Tibia I with 3–3 ventral spines, lateral spines present on both sides. Metatarsus I with 2–2 ventral spines, lateral spines usually present on both sides.

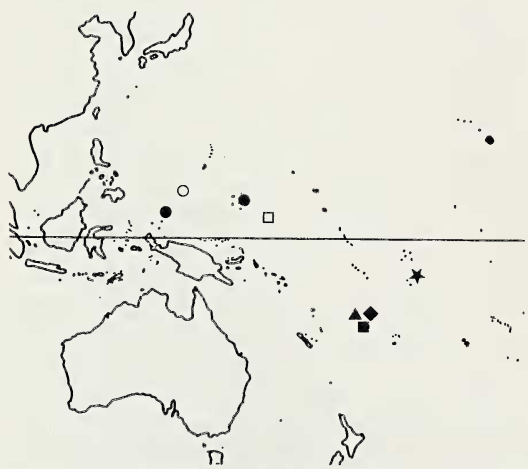
Epigynum often with two large oval membranous "windows"; ducts forming loops which usually lie almost entirely posterior to the windows. In some species the windows are smaller and round, the external appearance of the epigynum then resembling that of *Ascyltus* species. A median septum between the windows varies from very narrow to about ⅔ of the diameter of one of the windows. Palp with sinuous reservoir, embolus coiled flat on the anterior part of the bulb ventrally or three-dimensionally at the anterior end of the bulb (Figs. 3, 8). A characteristic color pattern is common to several species (Figs. 5, 18): *C. alburna* Keyserling 1882, *C. frontaligera* (Thorell 1881), *C. mitellata* (Thorell 1881), *C. nimbata* (Thorell 1881) and the six new species described below. A somewhat different pattern is present in *C. flavolineata* (Berland 1938) and *C. piscula* (L. Koch 1867) (Figs. 1, 2). Ventral coloration whitish to whitish-yellow.



Map 1.—Major island groups in the Pacific Ocean.

Cytaea piscula (L. Koch 1867)
Figs. 1–4, Map 2

Attus pisculus L. Koch 1867, p. 224.
Cytaea piscula (L. Koch): Berland 1929, p. 73.



Map 2.—Distribution of seven species of *Cytaea* in the Pacific. *Cytaea piscula* (★), ***Cytaea carolinensis*** new species (●), ***Cytaea koronivia*** new species (◆), ***Cytaea nausori*** new species (▲), ***Cytaea ponapensis*** new species (□), ***Cytaea rai*** new species (○), and ***Cytaea vitiensis*** new species (■).

Discussion.—The palps of our specimens agree with that of the type specimen, whose unpublished drawing was made available by Dr. M. Żabka. Embolus coiled flat on ventral surface of bulb, its basal width less than half width of bulb (Fig. 3). In this it resembles *C. rai* new species and *C. vitiensis* new species. It is distinguished from these by the retrolateral tibial apophysis of the palp which extends forward to near middle of bulb and in ventral view shows a distal notch (Fig. 3).

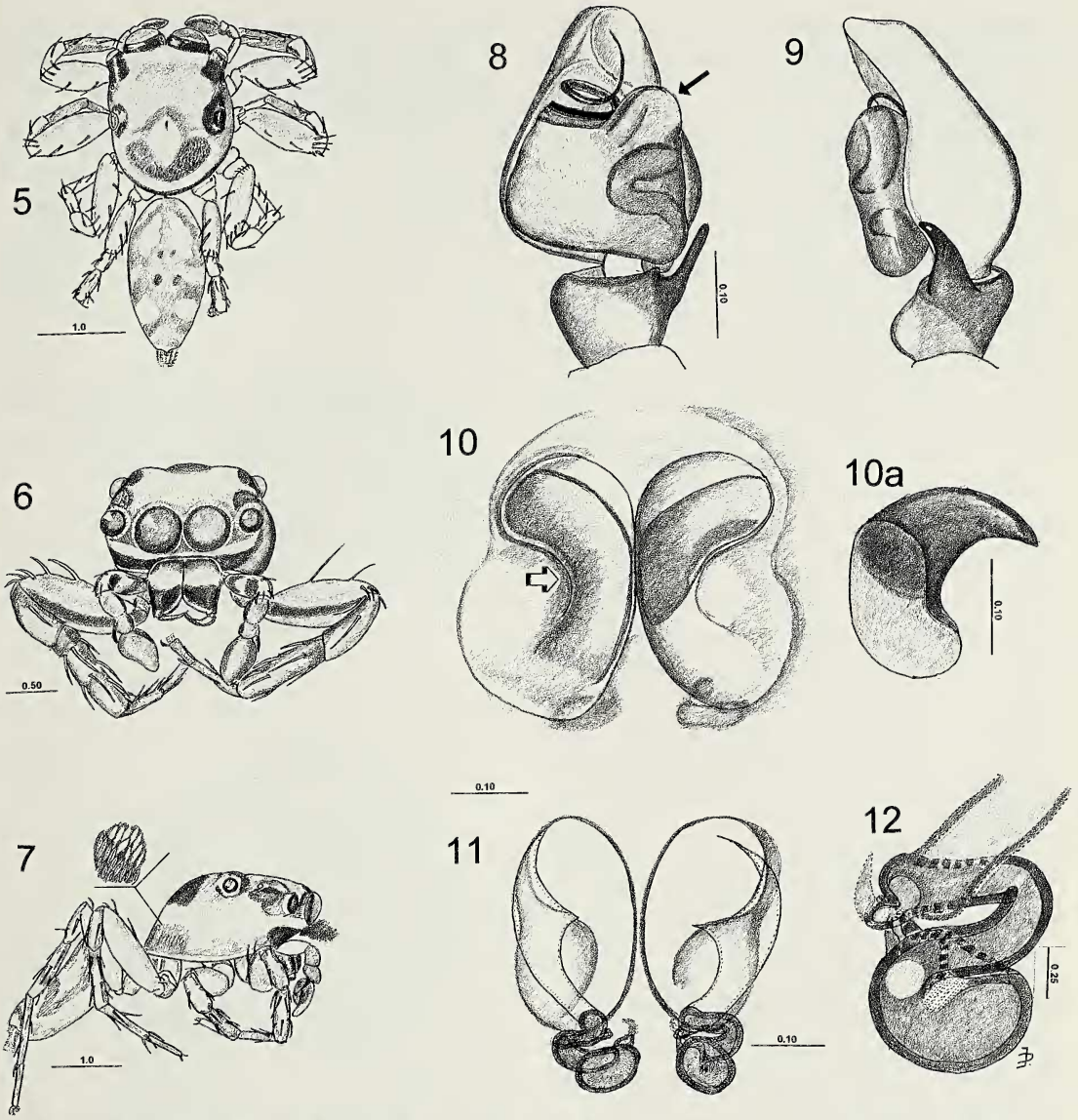
Description.—*Male:* (n = 2). Total length 4.5, 4.7; length of carapace 1.9, 2.2; maximum carapace width 1.5, 1.7; eye field length 1.2, 1.3; eye row I width 1.5, 1.5. *Legs:* Leg formula 4–3–1–2, patella-tibia III=IV. Patella-tibia I length 1.6 (n = 1).

Material examined.—AMERICAN SAMOA: *Tutuila,* Fagatogo, 2♂ 1imm, 14 July 1973 (JAB).

Distribution.—Samoa.

Cytaea carolinensis new species
Figs. 5–12, Map 2

Holotype.—Male holotype from Caroline Islands, Palau, Malakal Island, dry tropical forest, tree shaking, 14 March 1973, (J.W. Berry & J.A. Beatty) (BPBM).



Figures 5–12.—***Cytaea carolinensis*** new species from Palau, Caroline Islands. 5, Holotype male, dorsal appearance; 6, Holotype male, frontal appearance; 7, Holotype male, lateral appearance; 8, Palp ventrally of holotype, with arrow showing projection of bulb lateral to embolus; 9, Palp laterally; 10, Epigynum with entrances and grooves blocked by waxy material, with arrow indicating heavily sclerotized insemination duct; 10a, Waxy plug removed from epigynum; 11, Internal structure of epigynum after removal of material from the copulatory opening; 12, Left single spermatheca and duct (note junction of unsclerotized and sclerotized parts of the duct).

Etymology.—The species is named for the Caroline Islands, where it was collected.

Diagnosis.—Differs from most other *Cytaea* in palpal structure (Figs. 8, 9), but corresponds with male of *C. ponapensis* new species (Fig. 21) by having the embolus forming a three-dimensional spiral at the anterior end of the bulb, rather than a flat coil on the ventral surface. The smaller loop of the embolus and anterior projection of the bulb lateral to embolus distinguish it from *ponapensis* (Fig. 8). The female is similar to *C. ponapensis* new species and *C. rai* new species in having the epigynal fossae longer than wide and the insemination ducts posterior to the fossae. It is distinguished by having the fossa margin in-

distinct and the external part of the insemination duct heavily sclerotized, giving an appearance of two C's facing in opposite directions (Fig. 10).

Description.—*Male:* (n = 5). Total length 4.1–5.1 ($\bar{x}$ = 4.67), length of carapace 2.1–2.5 ($\bar{x}$ = 2.24), maximum carapace width 1.5–1.7 ($\bar{x}$ = 1.58), eye field length 1.1–1.3 ($\bar{x}$ = 1.23), eye row I width 1.5–1.8 ($\bar{x}$ = 1.63). Cephalothorax light yellow, with black around lateral eyes; a brown semicircular spot on thoracic region, bordered anteriorly by a light transverse band and posteriorly by a distinct white band on the posterior slope; a dark band on posterior margin (Fig. 5). Sides of cephalothorax whitish-yellow, with marginal band of light-brown scales (Fig. 7) and thin, whitish line along the ventral edge. Abdomen light brown, with indistinct pattern of white and dark spots. Clypeus with an anterior line of small white scales and darker edge; three darker yellow triangles between anterior eyes and the band of white scales. Basal and apical surfaces of chelicerae dark brown (Fig. 7), separated by transverse band of white setae. A dark spot apically on prolateral surface of pedipalpal femur. *Legs:* Whitish; a dark band along anterior surface of femur I and dark ventral surface of tibia I and patella I in some specimens. Leg formula 3–4–1–2; patella-tibia III = IV. Patella-tibia I length 1.55–1.8 ($\bar{x}$ = 1.69). *Palp:* Short and broad, triangular, embolus located anteriorly and twisted into a coil, seminal reservoir ducts sinuous, but limited to retrolateral half of the bulb; apophysis of medium length, ventrally appears as a narrow plate, rounded apically, laterally hook-like; tibia short (Figs. 8, 9).

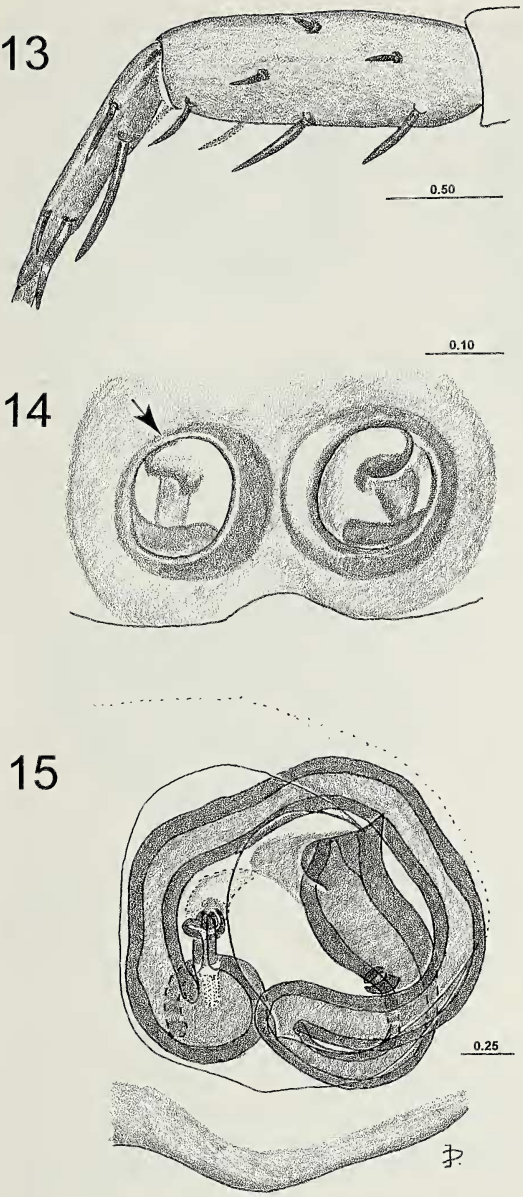
Female: (n = 5). Total length 5.5–6.5 ($\bar{x}$ = 5.93), length of carapace 2.5–2.7 ($\bar{x}$= 2.59), maximum carapace width 1.9–2.1 ($\bar{x}$ = 1.91), eye field length 1.3–1.5 ($\bar{x}$ = 1.43), eye row I width 1.7–1.9 ($\bar{x}$ = 1.82). Body shape and proportions resembling male, pale without distinct contrasts. Cephalothorax yellowish with slightly darker yellow eye field, lateral eyes black-rimmed, with a few colorless scales on eye field. Abdomen covered with minute brownish scales and small spots of whitish scales that also make an oval anterior spot; abdomen ventrally white, covered by colorless scales. Frontal aspect light fawn, with eyes rimmed dorsally with white scales, more conspicuous than in male; a transverse belt of dense white setae and scales along clypeus, chelicerae yellowish-fawn, with a spot of whitish setae medially. Ventral aspect light. Pedipalpal femur and patella white. *Legs:* Yellow, tibia and tarsus light fawn with sparse long colorless setae. Femur I without dark band. Leg formula 3–1=4–2; patella-tibia III=IV. Patella-tibia I length 2.0–2.3 ($\bar{x}$ = 2.10). *Epigynum:* Elongate oval with two oval depressions separated by a thin, sclerotized ridge, a circular area anteriorly in each depression, delimited posteriorly by a broad ridge of funnel-shaped copulatory opening (Figs. 10–12). Copulatory duct not sclerotized distally, and leading to a sclerotized transverse loop which merges with an oval spermathecal chamber (Fig. 12).

Material examined.—CAROLINE ISLANDS: *Palau,* Malakal, dry tropical forest, tree shaking, 6♂ (including holotype) 1♀, 14 March 1973 (JWB & JAB). Rock Island east of Malakal, dry tropical forest, elev. 100 ft., curled up leaf, 1♀, 8 March 1973 (JWB). Rock Island east of Malakal, tree shaking, 1♀ 4imm, 9 February 1973 (JWB). Koror, Japanese temple ruins, tree shaking, 1♂, 14 March 1973 (JAB & JWB). Koror, scrub forest in vacant lot, tree shaking, 1♂, 13 March 1973 (JAB & JWB). Koror, in cave entrance, 1♂, 13 March 1973 (JAB & JWB). Arakabesan Island, mixed tropical forest, elev. 50–70 ft., tree shaking, 2♂ 3imm, 16 February 1973 (JWB). Arakabesan Island, dry tropical forest, elev. 374 ft., tree shaking, 1♂1♀, 1 March 1973 (JWB). Arakabesan Island, mixed tropical forest, 2♀, 1 March 1973 (JWB). Angaur, roadside bushes, 1♂1♀, 28 April 1973 (JWB & JAB). Babelthuap, Airai, lowland tropical forest, north of airstrip, 1♂ 1imm, 27 March 1973 (JAB & JWB). Babelthuap, below forestry headquarters at Nekkin, mixed tropical forest in open, shaking trees, 4♂1♀ 2imm, 3 February 1973 (JWB). Babelthuap, Ngaremlengui, in woods, 1♂2♀ 3imm, 21 April 1973 (JWB & JAB). Babelthuap, Ngaremlengui, grass field, sweeping, 1♀ 1imm, 21 April 1973 (JAB & JWB). Babelthuap, Airai, tree in field, 1♂1♀ 1imm, 7 May 1973 (JAB & JWB). Babelthuap, Airai, below SDA school, dry tropical forest, 1♂1♀ 1imm, 10 March 1973 (JAB & JWB). Peleliu, mixed tropical forest, 4♂, 22 March 1973 (JWB). *Truk,* Moen, tree shaking, quarry hill, 1♂ 1imm, 12 June 1973 (JAB & JWB).

Distribution.—Known from Truk and the Palau group in the Caroline Islands.

Cytaea koronivia new species
Figs. 13–15, Map 2

Holotype.—Holotype female from Fiji, Viti Levu, 22.4 km W of Suva, 5 May 1980 (J.W. Berry & E.R. Berry) (BPBM).



Figures 13–15.—Holotype female of ***Cytaea koronivia*** new species from Viti Levu, Fiji. 13, Tibia I retrolaterally (note reduction in size of lateral spines); 14, Epigynum, with arrow indicating copulatory opening near anterior margin; 15, Internal structure of epigynum with left spermatheca and ducts.

Etymology.—The name *koronivia* is a noun in apposition after the locality where the first specimen was collected.

Diagnosis.—Epigynal fossae round or slightly longer than wide, septum wide. Resembles *C. subsiliens* Kulczynski 1910 (Prószyński 1984) but has the copulatory openings nearer the anterior margin of the epigynum (Fig. 14). The duct of the epigynum differs from that of other species by almost completely encircling one of the round windows before entering the globular spermatheca (Fig. 15).

Description.—*Female:* (n = 2). Total length 7.3, 7.6; length of carapace 2.9, 3.1; maximum carapace width 2.2, 2.5; eye field length 1.7, 1.7; eye row I width 2.1, 2.2. Cephalothorax dorsally light brown, with arrowhead-shaped whitish spot just behind fovea; eye field fawn, covered with minute colorless scales, limited posteriorly by a row of brown scales, thoracic region medially with dark brown and whitish scales, sides and posterior slope yellow with sparse whitish scales. Black areas around lateral and anterior eyes, covered with whitish and a few reddish scales. Abdomen light greyish-yellow with indistinct pattern of lighter pairs of diagonal spots covered with colorless scales, and separated by lines of slightly darker, brownish scales. Frontal aspect without any contrasting spots, pale fawn, with area around AME brown, eyes surrounded with whitish setae, clypeus very low with whitish setae above chelicerae. Chelicerae brownish-yellow; pedipalps with femora whitish, patella and tibia yellow, tarsus light brown, all covered with whitish setae. *Legs:* Prolateral surfaces of femora I whitish, remaining segments yellow to light brown, yellow on legs II-IV. Tibia I-II with three lateral spines on each side, retrolateral spines much shorter than the others; metatarsi I-II with 2–2 ventral spines and two lateral spines on each side; legs III-IV spines long or only slightly shortened on tibiae. Leg formula 4–1=3–2; patella-tibia III = IV. Patella-tibia I length 2.2, 2.4. *Epigynum:* With two circular "windows", the ducts forming a circle dorsal to the windows, spermatheca globular (Figs. 14, 15).

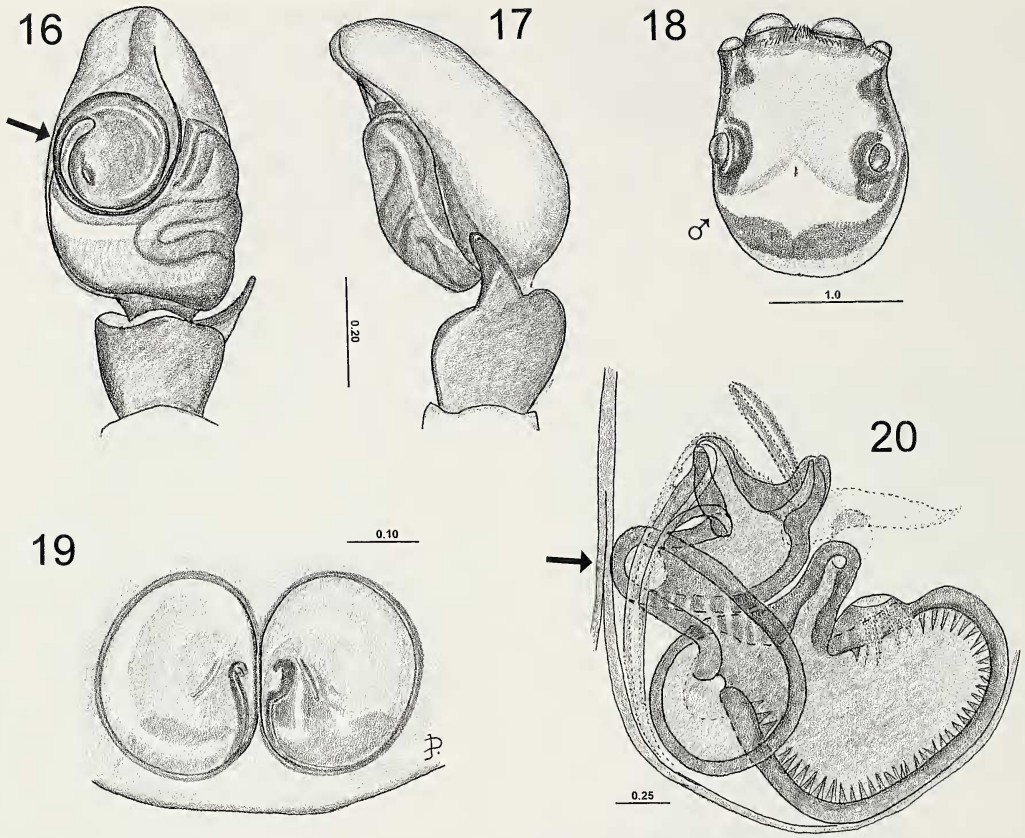
Male: The male is unknown.

Material examined.—FIJI: *Viti Levu,* 22.4 km W of Suva City, forest, sweeping and shaking, 1♀ (holotype), 5 May 1987 (JWB, ERB). Nausori, Koronivia Research Station, on tree trunk, 1♀, 19 May 1980 (JAB).

Distribution.—Known only from Viti Levu, Fiji.

Cytaea nausori new species
Figs. 16–20, Map 2

Holotype.—Holotype male from Fiji, Viti Levu, Nausori Highlands Forest Preserve,



Figures 16–20.—***Cytaea nausori*** new species from Viti Levu, Fiji. 16, Palp of holotype ventrally, with arrow indicating wide coiled base of embolus; 17, Palp of holotype laterally; 18, Dorsal pattern of holotype male cephalothorax; 19, Epigynum; 20, Internal structure of left side of epigynum, with arrow indicating duct forming two loops.

Leuve-i-toko Block, elev. 1500 ft., shaking and hand collecting, 27 May 1987 (J.W. & E.R. Berry) (BPBM).

Etymology.—The name is a noun in apposition after the area where the type specimen was collected.

Diagnosis.—The embolus of the palp is coiled flat on the bulb, its circular base almost ½ of the bulb width (Figs. 16, 17). The epigynum has two circular windows separated by a linear septum (Fig. 19), resembling that of *C. vitiensis* new species from which it differs by having the duct forming two loops (Fig. 20) rather than one.

Description.—*Male:* (*n* = 1). Total length 4.3, length of carapace 2.0, maximum carapace width 1.5, eye field length 1.1, eye row I width 1.5. Cephalothorax covered with semitransparent brownish and colorless scales. There are two transverse marginal spots of whitish scales anterior to PLE. Eye field light fawn, PLE encircled with whitish scales ventrally and anteriorly, with reddish scales posteriorly and dorsally, PME surrounded with reddish scales covering black pigmented area. There is a spot of white scales between PME and PLE with three transverse bands across the thoracic region behind the eyes: a flattened diamond-shaped upper white band; a median broad band of dense, blackish-brown scales; and a lower, marginal row of whitish scales, extending along sides beneath lateral eyes (Fig. 18). Ventral edge of carapace brown. A row of long flattened whitish scales behind anterior eyes, and behind junction of AME a few orange ones. Abdomen whitish, covered sparsely with small, orangish scales, replaced by whitish ones along median line. A few sparse dark setae scattered over the abdomen. Frontal aspect differs from *Cytaea carolinen-*

sis new species (Fig. 6) by absence of transverse white and dark belts. Face light brown, clypeus very low, light brown without contrasting scales; chelicerae slender, short, light brown, apically yellow; pedipalps greyish-yellow, with tibia and cymbium light brown. Prolateral surface of femur I whitish, with a faint darker ring near apical end, with no other dark marks. *Legs:* Femora whitish, with transverse darkening apically on femur I, remaining segments yellow, with two indistinct darker brown annuli on tibia I. Leg formula 4–3=1–2, patella-tibia III=IV. Patella-tibia I length 1.5. *Palp:* Embolus coiled flat on bulb with a large circular base, retrolateral apophysis a long slightly curved bluntly rounded triangle (Figs. 16, 17).

Female: (n = 1). Total length 5.9, length of carapace 2.1, maximum carapace width 1.8, eye field length 1.3, eye row I width 1.6. Whitish, with cephalothorax and abdomen covered with minute orange scales, with no contrasting pattern; lack of scales on lower sides of cephalothorax and abdomen leaves these areas whitish. Lateral eyes, on black pigmented spots, are surrounded with whitish scales; a row of elongate colorless or orange scales above eyes. Frontal aspect pale yellowish without contrasting marks. *Legs:* Patella-tibia I length 1.7; uniformly whitish, with tibiae-tarsi yellow. Leg formula 4–3–1–2, with patella-tibia III=IV. *Epigynum:* As described in diagnosis *(Figs. 19, 20).*

Material examined.—**FIJI**: *Viti Levu,* Nausori Highlands Forest Preserve, Leuve-i-toko Block, elev. 1500 ft., shaking, picking, 1♂ (holotype) 1♀, 27 May 1987 (JWB & ERB).

Distribution.—Known only from Viti Levu in Fiji.

Cytaea ponapensis new species
Figs. 21–25, Map 2

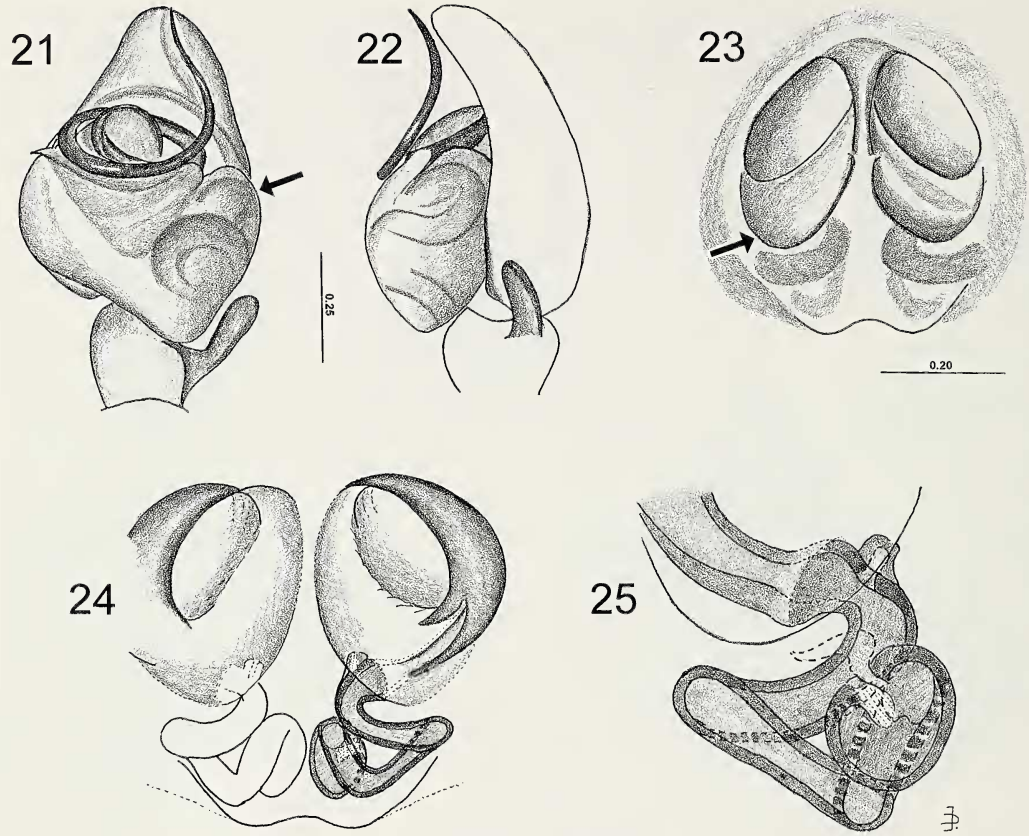
Holotype.—Male holotype from the Caroline Islands, Ponape, E. of Kolonia, breadfruit/ivory nut forest. 8 June 1973 (J.W. Berry & J.A. Beatty) (BPBM).

Etymology.—Named after the island of Ponape (Pohnpei) in the Caroline Islands where the specimens were collected.

Diagnosis.—Resembles *C. carolinensis* new species in genitalia and *C. rai* new species in color pattern. The male differs from *C. carolinensis* by the wider coil of the embolus and absence of a projection of the bulb lateral to the embolus (Fig. 21). The three-dimensional apical coil of the embolus (Fig. 21) separates it from *C. rai.* The female has the margins of the epigynal fossae distinct and the anterior portions of the fossae obliquely divergent (Fig. 23). The epigynum of *C. rai* is larger, has parallel fossae and a widening of the septum near its middle (Fig. 28), while that of *C. carolinensis* has indistinct fossal margins and "c" shaped fossae (Fig. 10).

Description.—*Male:* (n = 4). Total length 4.3–4.8 ($\bar{x}$ = 4.54), length of carapace 2.1–2.2 ($\bar{x}$ = 2.15), maximum carapace width 1.4–1.5 ($\bar{x}$ = 1.46), eye field length 1.1–1.3 ($\bar{x}$ = 1.21), eye row I width 1.4–1.5 ($\bar{x}$ = 1.45). Cephalothorax light yellow, almost bare, with whitish scales on black anterior edge and around lateral eyes, spots of brown scales behind PLE. Two transverse spots of brown scales at mid-length of posterior thoracic slope, forming a semicircular dark band, broken in the middle; a thin dark ventral line along the edge of carapace, covered with brown scales. Abdomen whitish above, laterally brown with white stripe; lower sides whitish; spinnerets light greyish-yellow. Frontal aspect whitish with edge of eye field dark, covered by sparse whitish scales, clypeus light fawn; anterior eyes surrounded by long colorless setae; clypeus almost bare. Chelicerae whitish-yellow, with transverse dark brown band in proximal ⅓; a brown spot on distal end of pedipalpal femur and an irregular dark grey line along ventro-prolateral edge of femur I. *Legs:* Legs I yellowish-white. Legs II-IV whitish with some segments yellow. No darkenings on legs other than a dark line along anterior surface of femur I. Leg formula 4–3–1–2, patella-tibia III=IV. Patella-tibia I length 1.5–1.7 ($\bar{x}$ = 1.61). *Palps:* Pedipalps light yellow, with brownish-yellow dorsal surface of tibia and cymbium. Embolus located antero-ventrally, makes 1½ coil; tibial apophysis of medium length, ventrally appears as a narrow plate, rounded apically, laterally tongue-like; tibia short (Figs. 21, 22).

Female: (n = 5). Total length 5.6–6.4 ($\bar{x}$ = 6.02), length of carapace 2.4–2.7 ($\bar{x}$ = 2.54), maximum carapace width 1.8–1.9 ($\bar{x}$ = 1.86), eye field length 1.30–1.35 ($\bar{x}$ = 1.31), eye row I width 1.65–1.75 ($\bar{x}$ = 1.68). Body shape and proportions resembling male, pale colored, without contrasts, except dark rims around

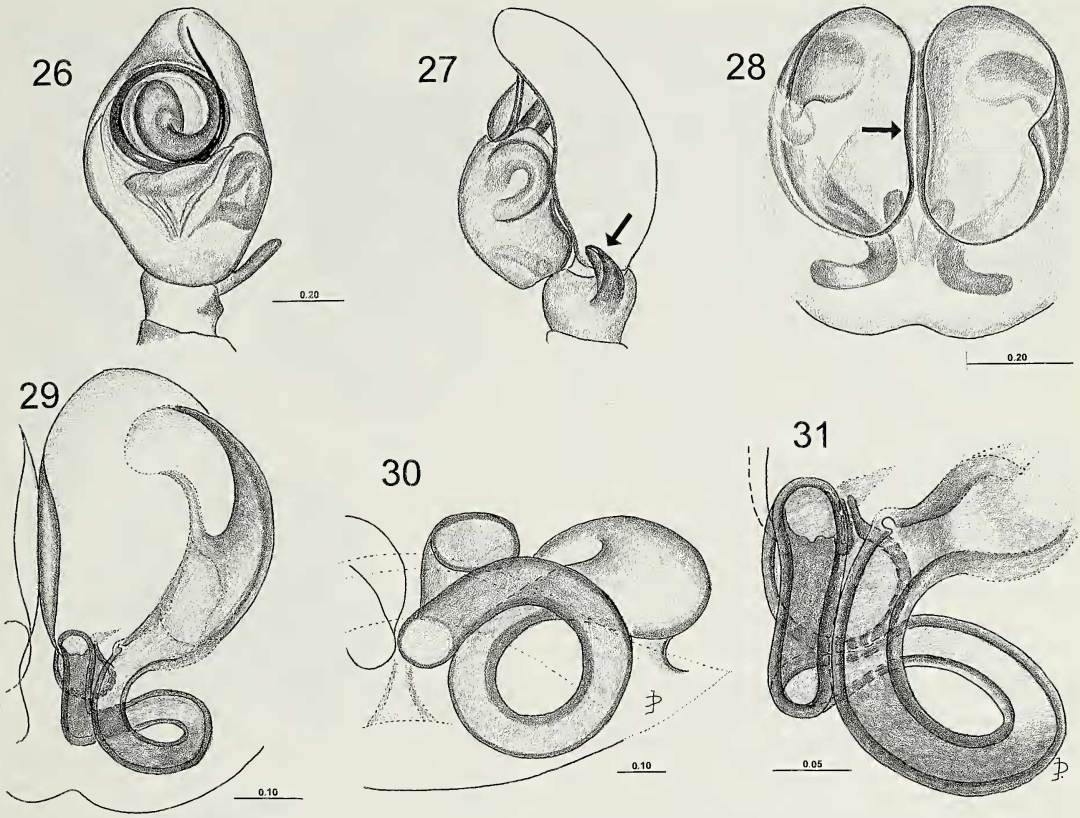


Figures 21–25.—***Cytaea ponapensis*** new species from Ponape, Caroline Islands. 21, Palp of holotype ventrally, with arrow indicating plate-like tibial apophysis; 22, Palp of holotype laterally; 23, Epigynum, with arrow showing fossae distinct with obliquely divergent anterior portions; 24, Internal structure of epigynum, ventral view; 25, Spermatheca, dorsal view, left side.

AME and lateral eyes. Cephalothorax yellowish with eye field whitish and with yellowish-grey scales on thoracic region. Abdomen light, covered uniformly with light yellowish-grey scales. Frontal aspect whitish, anterior eyes surrounded with dense long white scales; clypeus very low; chelicerae, pedipalps and leg I whitish to whitish-yellow. *Legs:* Whitish. Leg formula 4–3–1–2, patella-tibia III=IV. Patella-tibia I length 2.0–2.2 ($\bar{x}$ = 2.07). *Epigynum:* (Figs. 23–25). With two large oval fossae, surrounded by thin sclerotized rim; anterior part further depressed and also thinly dark rimmed. These deeper depressions form the entrance to a large chamber-like anterior part of copulatory duct, which runs semicircularly, narrowing, around anterior half of epigynum. At the posterior end of the fossa the copulatory ducts pass through short, non-sclerotized passage into a narrow sclerotized spermatheca. The spermatheca turns laterally, then medially, to an oval, terminal chamber. That structure resembles closely internal structures of epigynum in *Cytaea rai* new species from Yap, and a little less closely *Cytaea carolinensis* new species from Palau.

Material examined.—CAROLINE ISLANDS: *Ponape,* Kolonia, roadside near Cliff Rainbow Hotel, 4♀, 3 June 1973 (JWB & JAB). Palm forest E of Kolonia, elev. 200 ft., 1♀ 3imm, 5 June 1973 (JWB & JAB). Nett Municipality, Nan Pil, about 1500 ft., tree shaking, 3♂1♀ 1imm, 6 June 1973 (JWB & JAB). E of Kolonia, breadfruit-ivory nut palm forest, hand collecting, 2♂, 8 June 1973 (JWB & JAB). SW of Sekere School, shaken from bushes on roadside bank, 1♂1♀, 10 June 1973 (JWB & JAB).

Distribution.—Known only from Ponape, Caroline Islands.



Figures 26–31.—***Cytaea rai*** new species from Yap, Caroline Islands. 26, Palp of holotype ventrally; 27, Palp of holotype laterally, with arrow indicating hook-like tibial apophysis; 28, Epigynum, with arrow indicating swelling at mid-length; 29, Internal structure of epigynum showing single spermatheca and ducts; 30, Internal structure of epigynum, posterior view, showing coiling of ducts; 31, Detail of epigynal coils, dorsal view, left side.

Cytaea rai new species
Figs. 26–31, Map 2

Holotype.—Holotype male from Caroline Islands, Yap, Yap I., Fedor, nightlighting in forest, 19 February 1980, (J.W. Berry) (BPBM).

Etymology.—*Rai,* a noun in apposition, are the large stone discs used as money in Yap.

Diagnosis.—The very broad palpal bulb lacking hooks or projections, the embolus coiled flat on the bulb ventrally, and the short, broad curved tibial apophysis of the palp (Figs. 26, 27) distinguish the male from other species of the genus. The female resembles *C. laticeps* (Thorell 1878) and *C. sinuata* (Doleschall 1859), but differs from them by the large oval windows of the epigynum in combination with a swelling at midlength of the septum (Figs. 28, 29).

Description.—*Male:* (n = 3). Total length 4.3–4.8 ($\bar{x}$ = 4.55), length of carapace 2.0–2.3 ($\bar{x}$ = 2.15), maximum carapace width 1.4–1.5 ($\bar{x}$ = 1.48), eye field length 1.1–1.2 ($\bar{x}$ = 1.18), eye row I width 1.45–1.55 ($\bar{x}$ = 1.52). Cephalothorax light yellow, almost bare, with a few whitish scales on black ring of lateral eyes, spots of brown scales behind PLE and two transverse spots of brown scales in the midlength of posterior thoracic slope, making together a semicircular dark band, broken in the middle. A thin dark line along the ventral edge of carapace, covered with brown scales. Abdomen whitish, with a marginal brown streak of scales that connects angularly near spinnerets with a similar lower streak, along the sides, leaving a white streak between the dark ones; lower sides whitish; spinnerets light greyish-yellow. Frontal aspect whitish with eye field and clypeus light brown; anterior eyes surrounded by long setae with whit-

ish ends. Clypeus almost bare. Chelicerae whitish-yellow, with transverse dark brown band in proximal ⅓ of their length. A dark spot on prolateral apical end of palpal femur and an irregular dark grey line along prolateral surface of femur I. Pedipalps light, with darker tibia and light brown dorsal surface of cymbium. *Legs:* Legs I yellowish-white, some segments yellow, with long, brown spines; dark line along anterior surface of femur I. Leg formula 4=3–1–2, patella-tibia III=IV. Patella-tibia I length 1.65–1.75 ($\bar{x}$ = 1.70). *Palp:* Embolus located antero-ventrally, makes 1½ coils; tibial apophysis of medium length, ventrally appears as a narrow plate, rounded apically, laterally hook-like; tibia short (Figs. 26, 27).

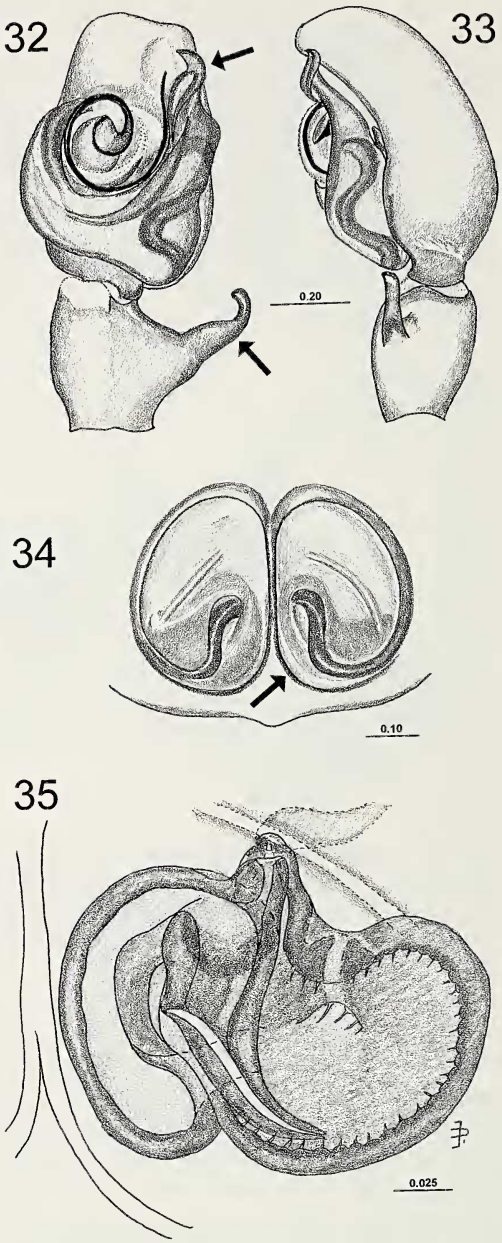
Female: (n = 3). Total length 5.2–6.1 ($\bar{x}$ = 5.75), length of carapace 2.0–2.5 ($\bar{x}$ = 2.35), maximum carapace width 1.5–1.8 ($\bar{x}$ = 1.70), eye field length 1.1–1.3 ($\bar{x}$ = 1.25), eye row I width 1.1–1.3 ($\bar{x}$ = 1.25). Body shape and proportions resembling male, pale without striking contrasts. Cephalothorax yellowish with eye field whitish and with colorless scales. Abdomen whitish, no pattern visible. Frontal aspect whitish, the anterior eyes surrounded with dense, long, white scales; clypeus very low; chelicerae, pedipalps and leg I whitish to whitish-yellow. *Legs:* Leg formula 4–3–1=2; patella-tibia III=IV. Patella-tibia I length 1.5–2.0 ($\bar{x}$ = 1.85). *Epigynum:* With two large oval fossae. Septum with a swelling at mid-length (Figs. 28, 29). Duct curving first laterally, then medially and forward to the spermatheca (Figs. 30, 31).

Material examined.—CAROLINE ISLANDS: *Yap,* Fedor Village, nightlighting, 1♂ (holotype), 19 February 1980 (JWB). Fedor Village, Dalipebinau Municipality, coconut grove, tree shaking, 1♂ 1imm, 29 January 1980 (JWB). Gagil-Tomil, mixed forest, 1♂ 1imm, 30 May 1973 (JAB & JWB). Colonia, St. Mary's school, sweeping bushes, 2♀ 3imm, 11 March 1980 (JWB). Aringel village, tree shaking, 1♀ 5imm, 3 March 1980 (JWB).

Distribution.—Known only from Yap Island in the Caroline Islands.

Cytaea vitiensis new species
Figs. 32–35, Map 2

Holotype.—Holotype male from Fiji, Viti Levu, Nausori Highlands Forest Reserve, Koronsingalevu Block, elev. 1500 ft., sweeping



Figures 32–35.—***Cytaea vitiensis*** new species from Viti Levu, Fiji. 32, Palp of holotype ventrally, with arrows showing twisted process near distal end of bulb and the strongly curved tibial apophysis; 33, Palp of holotype laterally; 34, Epigynum, showing oval fossae and sclerotized structures distal from septum; 35, Internal structure of epigynum with left spermatheca and ducts.

and shaking, 27 May 1987, (J.W. & E.R. Berry) (BPBM).

Etymology.—Named for its occurrence on the island of Viti Levu, Fiji.

Diagnosis.—Similar to *Cytaea nausori* new species. Epigynum differing by the more oval fossae and the sclerotized structures near opening being more distant from the septum (Figs. 34, 35). In males, palp with retrolateral part of bulb produced distally into a twisted process that extends beyond alveolus nearly to end of cymbium; tibial apophysis strongly curved, set on projection of retrolateral tibia surface (Figs. 32, 33).

Description.—*Male:* (n = 5). Total length 5.0–5.5 ($\bar{x}$ = 5.19), length of carapace 2.3–2.6 ($\bar{x}$ = 2.46), maximum carapace width 1.8–1.9 ($\bar{x}$ = 1.85), eye field length 1.3–1.4 ($\bar{x}$ = 1.39), eye row I width 1.7–1.9 ($\bar{x}$ = 1.80). Cephalothorax covered with minute, semi-transparent colorless scales, plus a few light brown scales; eye field light fawn, black pigmented area around lateral eyes covered with whitish scales between anterior eyes and PLE, with reddish-brown scales below PME and behind PLE, intermixed with whitish scales behind the anterior eyes. Cephalothorax light brown dorsally with black rings around eyes, a broad band of dark brown scales running in a "U" below eyes from anterior corners of carapace across thoracic slope. Below and behind the dark band is a marginal band of white scales. Abdomen pale yellowish-brown, with small whitish and brownish scales, forming three pairs of narrow diagonal spots, a pair of white spots anteriorly, and an indistinct white marginal line. Sparse dark setae scattered over the abdomen. Frontal aspect with face light brown, the anterior eyes surrounded by whitish setae dorsally with a few brown ones, ventrally by setae basally dark, apically whitish. Clypeus light brown without contrasting spots or scales; chelicerae slender, short, light brown, covered basally and along retrolateral edge with long whitish setae. Pedipalps with femur whitish with a faint apical annulus, patella greyish-yellow, with tibia and cymbium basally brownish-yellow. *Legs:* Femur I whitish, with apical annulus, remaining segments brownish-yellow, with two indistinct dark brown annuli on tibia I. Legs II-IV whitish-yellow; all spines long. Leg formula 1–4=3–2; patella-tibia III≥IV. Patella-tibia I length 2.0–2.1 ($\bar{x}$ = 2.06). *Palp:* As described in diagnosis (Figs. 32, 33).

Female: (n = 1). Total length 6.6, length of carapace 2.7, maximum carapace width 2.0, eye field length 1.3, eye row I width 1.9. Cephalothorax yellow with a lighter diamond-shaped spot behind eye field and lighter on lower sides, transverse band of sparse darker brown scales across median part of posterior thoracic slope. Lateral eyes, on black pigmented spots, are surrounded with whitish scales. Frontal aspect pale yellow without contrasting marks, the anterior eyes surrounded by whitish setae. Abdomen pale, with brownish scales delimiting an indistinct paler triangular area anteriorly and a diamond-shaped one posteriorly. *Legs:* Legs II-IV uniformly whitish, with tibiae-tarsi yellow. Leg formula 4–3–2 (Leg I missing), patella-tibia III≥IV. *Epigynum:* Similar to *Cytaea nausori,* differing as described in diagnosis (Figs. 34, 35).

Material examined.—**FIJI**: *Viti Levu,* Nausori Highlands Forest Reserve, Koronsigalevu Block, elev. 1500 ft., sweeping, shaking, 1♂ (holotype), 27 May 1987 (JWB & ERB). Nandarivatu, tree shaking, elev. 900 m, 1♂, 1 April 1987 (ERB). Nandarivatu, Koro o' road at microwave tower, sweeping roadside vegetation, 1♀ 1imm, 13 May 1987 (JWB & ERB). Mangrove swamp by road near Namuka Harbor, sweeping, 1♂ 3imm, 2 May 1987 (JWB & ERB). Hill forest about 8 mi NE of Navua, tree sweeping, shaking, 3♂ 4imm, 2 May 1987 (JWB & ERB). Lami, tree in field, 4♂ 7imm, 23 May 1987 (JWB & ERB).

Distribution.—Known only from Viti Levu in Fiji.

Genus *Hasarius* Simon 1871

Type species *Attus Adansonii* Audouin 1825. Location or existence of type specimens is unknown.

Hasarius adansonii (Audouin 1825)

Attus Adansonii Audouin 1825, p.169
Hasarius Adansonii: Simon 1871, p. 330.

Discussion.—This nearly cosmopolitan salticid has numerous synonyms (see Bonnet 1957). It has been described and illustrated frequently (e.g., Davies & Żabka 1989). We present here only new collection records.

Material examined.—**PHILIPPINE ISLANDS**: *Luzon,* 4♂4♀ 1imm. **MARSHALL ISLANDS**: *Eniwetok,* 32♂47♀ 63imm. *Majuro,* 2♀. **FIJI**: *Viti Levu,* 5♂4♀ 4imm. **COOK ISLANDS**:

Rarotonga, 1♂. **MARQUESAS ISLANDS**: Nuku Hiva, 3♂7♀ 8imm. **HAWAIIAN ISLANDS**: *Hawaii,* 8♂13♀ 13imm; *Midway,* 1♂.

Distribution.—Asia, Africa, North America, South America, Europe, Australia, Oceania.

Genus ***Lakarobius*** new genus

Type species.—*Lakarobius alboniger* new species, from Viti Levu, Fiji.

Etymology.—*Lakarobius* signifies living in trees, from Greek *lakara,* a kind of tree, and *bios,* life. Gender masculine.

Diagnosis.—Resembles *Cytaea* and *Xenocytaea* in male genitalia; however, the combination of four-cusped retromarginal cheliceral tooth (two cusps in *Cytaea* and *Xenocytaea*), two promarginal cheliceral teeth (4–5 in *Cytaea*), absence of lateral spines on metatarsus I and non ant-like form distinguishes *Lakarobius* from all other Pacific fissident genera.

Descriptive notes.—Small black and white fissident salticid genus. Chelicerae with four-cusped retromarginal cheliceral tooth and two promarginal cheliceral teeth. With patellar spines. Without lateral spines on tibiae and metatarsi I and II. With 3–3 ventral spines on tibiae I and II, 2–2 ventral on metatarsi I and II. With 3 to 5 dorsal spines on each femur.

Lakarobius alboniger new species
Figs. 36–43

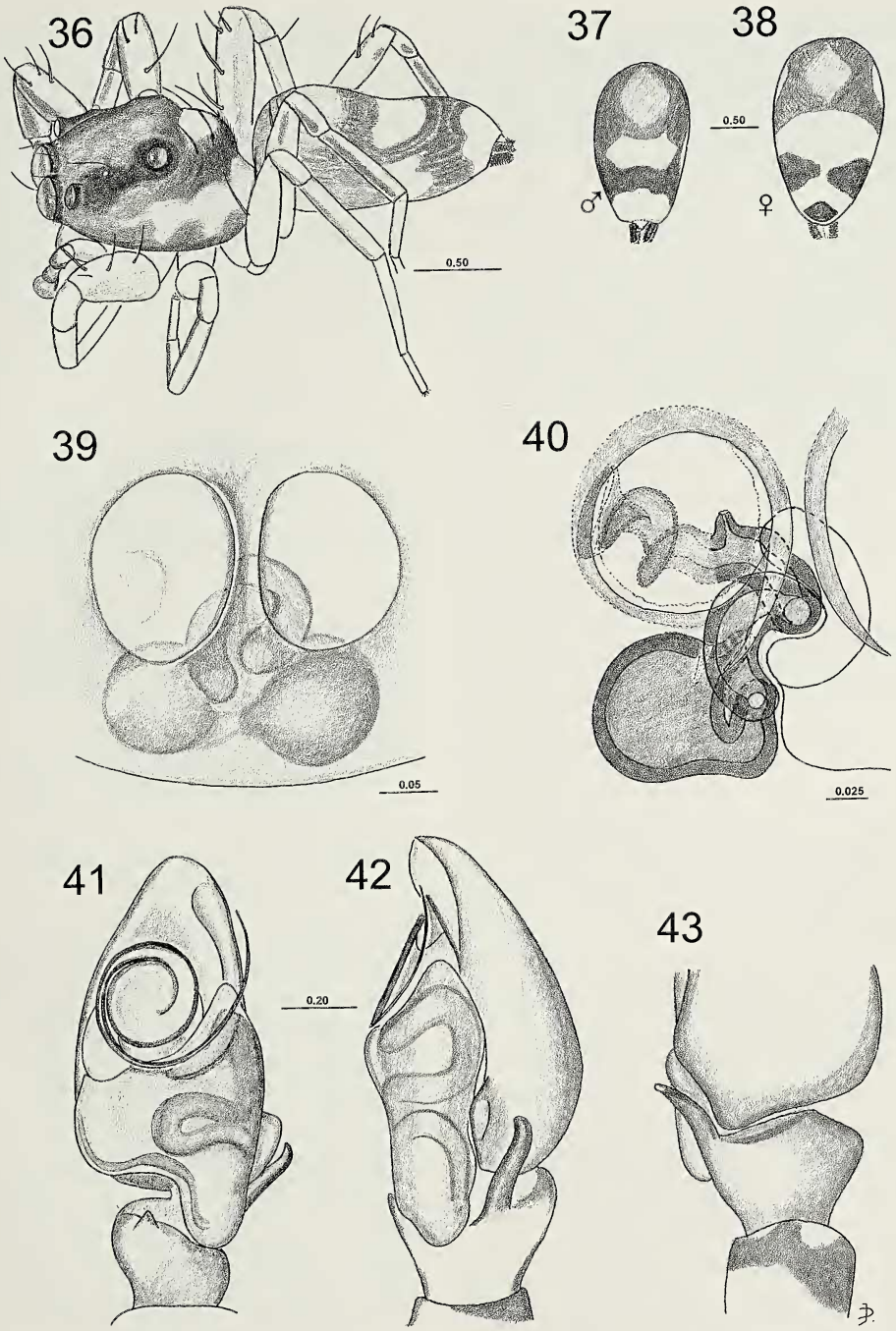
Holotype.—Holotype male from Fiji, Viti Levu, Nausori Road, 3 km N of Queen's Road, tree shaking in forest, 7 May 1987 (J.W. Berry, E.R. Berry and J.A. Beatty) (BPBM).

Etymology.—The specific name *alboniger,* "white-black", refers to the conspicuous black and white dorsal pattern of the spider.

Diagnosis.—In addition to the generic characters, the color pattern, long straight proximal lobe on the male palpal bulb, sinuous tibial apophysis of the male palp, and epigynal structure distinguish the single species of this genus from all other known Pacific salticids (Figs. 36–38).

Description.—*Male:* (n = 5). Total length 2.9–3.3 ($\bar{x}$ = 3.01), length of carapace 1.3–1.4 ($\bar{x}$ = 1.36), maximum carapace width 1.00–1.03 ($\bar{x}$ = 1.02), eye field length 0.8–0.9 ($\bar{x}$ = 0.87), eye row I width 1.00–1.03 ($\bar{x}$ = 1.02). Cephalothorax with greyish-brown eye field, black around lateral eyes and dark brown belt running below lateral eyes and around thoracic slope, leaving large white spot on flat surface of cephalothorax behind eye field. A white belt along lower sides and lower thoracic slope, the ventral margin of cephalothorax dark. Eye field covered with minute adpressed setae. Abdomen with large blackish and white areas (Figs. 36, 37) covered with sparse minute setae. Frontal view with face so reduced that prominent AME take all its width, ALE protruding from lateral surfaces, height of clypeus equal to ¼ of AME's diameter. Face brown, with sides covered with fine whitish setae; clypeus mostly bare, brown, with a row of long whitish setae. Chelicerae short, about AME's diameter, with slight basal bulge; white, with small dark spot on bulge. Anterior eyes surrounded with whitish setae; with ALE slightly above AMEs, their diameter equal to ½ that of AME. Pedipalps whitish, tibia and cymbium dorsally brownish, and patella grey at apex. *Legs:* Legs I white with thin grey line along prolateral surfaces of femur, patella, tibia and tarsus; faint traces of such lines prolaterally on tibiae II-IV. Leg formula 1=4–2–3, patella-tibia III>IV. Patella-tibia I length 1.1–1.2 ($\bar{x}$ = 1.14). *Palp:* Reservoir sinuous, a broad coil of embolus in ventral plane, bulb broad with posterior extension over anterior part of tibia, tibia short, tibial apophysis of medium length, narrow, slightly sinuous (Figs. 41–43).

Female: (n = 5). Total length 3.1–3.4 ($\bar{x}$ = 3.28), length of carapace 1.2–1.4 ($\bar{x}$ = 1.33), maximum carapace width 1.0–1.1 ($\bar{x}$ = 1.05), eye field length 0.8–0.9 ($\bar{x}$ = 0.86), eye row I width 1.00–1.03 ($\bar{x}$ = 1.01). Differs from male by lighter brown coloration of face; pedipalps white. Ventral view generally whitish with mouth parts slightly darker, abdomen in part suffused yellowish-grey (Fig. 38). *Legs:* Long and thin. Dark line on prolateral surfaces of leg I reduced to short black lines apically on femur, basally on patella and apically on tibia; weaker blackish spots retrolaterally on patella and tibia. Other legs entirely whitish with exception of small black spots on patella and tibia IV. Leg formula 1=4–2–3; patella-tibia III=IV. Patella-tibia I length 1.2–1.3 ($\bar{x}$ = 1.21). *Epigynum:* With two oval membranous windows, with spherical spermathecae located posterior to windows; copulatory openings invisible externally, (observable under compound microscope after staining with



Figures 36–43.—***Lakarobius alboniger*** new species from Viti Levu, Fiji. 36, Holotype male, general appearance; 37, Holotype male, abdominal pattern; 38, Female abdominal pattern; 39, Epigynum; 40, Internal structure of epigynum, right spermatheca and ducts; 41, Palp of holotype ventrally, with arrow indicating posterior extension of bulb; 42, Palp of holotype laterally; 43, Holotype pedipalpal tibia, dorsally.

Chlorazole Black E), located on lateral margin of each window with soft membranous duct running across window, making three coils before passing into sclerotized duct, which runs axially and makes two coils before opening to spermatheca (Figs. 39, 40).

Material examined.—**FIJI**: *Viti Levu,* Lami on tree in field, 2♂1♀, 23 May 1987 (JWB & ERB). Suva, Lauthala Bay, mangrove, 1♀, 29 May 1987 (JWB & ERB). Near Namuka Harbor, mangrove swamp by road, sweeping, 2♂3♀ 2imm, 2 May 1987 (JWB & ERB). Near Namuka Harbor, on mangrove, 1♂ 1imm, 2 May 1987 (JWB & ERB). Namosi Road, 7.7 km N of Queen's Road, roadside sweeping & shaking, 1♂, 7 May 1987 (JWB & ERB). Namosi Road, 3 km N of Queen's Road, tree shaking in forest, 5♂ (including holotype) 6♀ 9imm, 7 May 1987 (JAB, JWB & ERB). 8 mi NE of Navua, tree shaking, 1♂ 1imm, 2 May 1987 (JWB & ERB). 8–10 mi N of Nausori, hill forest, 1♂, 19 May 1980 (JWB & ERB). Nanduruloulou Research Stat., about 5 mi W of Nausori, shaken from dead banana leaves, 1♀, 15 May 1987 (JWB & ERB). Namosi Road, 7.7 km N of Nausori, on vegetation, hill forest, 1♂, 19 May 1987 (JWB & ERB).

Distribution.—Known only from Viti Levu, Fiji.

Genus *Menemerus* Simon 1868

Type species *Attus semilimbatus* Hahn 1827, p. 5. Location or existence of type specimens is unknown.

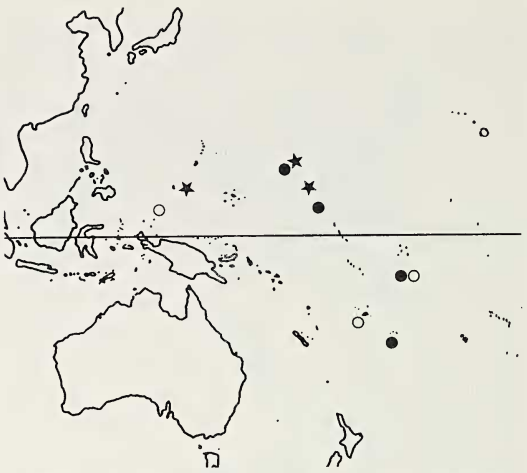
Menemerus bivittatus (DuFour 1831)

Salticus bivittatus DuFour 1831, p. 369.
Menemerus bivittatus (DuFour): Simon 1901, p. 599.

Discussion.—A cosmotropical salticid with many synonyms (see Bonnet 1957). Recently illustrated by Davies & Żabka (1989). We present only new collection records.

Material examined.—**MARSHALL ISLANDS**: *Kwajalein,* 3♀ 5imm; *Majuro,* 4♂4♀ 8imm; **MARIANA ISLANDS**: *Guam,* 1♀ 3imm. **CAROLINE ISLANDS**: *Palau,* 16♂13♀ 6imm; *Yap,* 2♂3♀ 2imm; *Truk,* 1♂; *Ponape,* 1♂1♀ 3imm. **FIJI**: *Viti Levu,* 2♂1♀. **COOK ISLANDS**: *Rarotonga,* 2♂; *Aitutaki,* 1♂1♀. **SOCIETY ISLANDS**: *Moorea,* 1♂5♀ 2imm. **TUAMOTU ISLANDS**: *Manihi,* 2♀ 1imm; *Rangiroa,* 1♀. **MARQUESAS ISLANDS**: Nuku Hiva, 2♂ 5imm. **HAWAIIAN ISLANDS**: *Midway,* 3♀.

Distribution.—Cosmotropical.



Map 3.—Distribution of three species of *Pseudicius* in the Pacific. *Pseudicius kraussi* (●), *Pseudicius punctatus* (○), and *Pseudicius nuclearis* (★).

Genus *Pseudicius* Simon 1885

Type species *Aranea encarpata* Walckenaer 1802, p. 241. Location of type specimen unknown.
Pseudicius Simon 1885a, p. 28.
Afraflacilla Berland & Millot 1941, p. 328 (synonymized with *Pseudicius* by Clark 1974, p. 22; removed from synonymy by Żabka 1993, p. 280).
Savaiia Marples 1957, p. 388 (first synonymized by Prószyński 1990, p. 316).

Discussion.—A diverse unident genus, containing more than 60 species spread over Europe, Africa, Asia, Australia and Pacific islands, which presents formidable difficulty in interpretation of relationships among species and groups of species. The problems it poses have been discussed on several occasions, most recently in Prószyński 1992.

Since that time Żabka (1993) proposed the transfer of about 40 species (without listing them) to a separate genus under the junior synonym *Afraflacilla* Berland & Millot 1941. Żabka acknowledges that *Pseudicius* is the closest relative of *Afraflacilla* because "both have similar habitus, femoral and carapace tubercles and homologies in palpal organ structures." However, species illustrated in his paper show characteristic traits visible in various groups of *Pseudicius,* like a frequently biramous tibial apophysis, but in some species with reduction or loss of either ramus, increase in length of embolus, from a very short apical one to twisting around bulb. Other vari-

able characters include presence or absence of distinctive epigynal pockets and various length of copulatory ducts, often coiled in various ways. Separation of *Afraflacilla* from the remaining *Pseudicius* would cut across relationships and complicate phyletic and zoogeographic patterns of the genus, without really contributing to our understanding of the relationships within the genus.

Diagnosis.—An elongate rather flattened unident salticid with a row of spine-bearing tubercles below the eyes and a row of microspines on femur I. This presumed stridulatory apparatus (Maddison 1987) is not present in any other genus in the geographical area considered here.

Description.—With a stridulatory row of tubercles with spines beneath the lateral eyes (Figs. 44–46), corresponding with a row of microspines on tubercles on the prolateral surface of femur I, visible only under very high magnification. Body very characteristic: elongated and relatively flat, with long, low cephalothorax, and long, low narrow abdomen. Legs I elongated and robust, heavily sclerotized, with swollen tibia and femur and reduced spines; remaining legs slender and shorter; however, in females legs IV are the longest. Abdomen elongate oval, posteriorly pointed, with a characteristic pattern, common to a majority of species. Chelicerae short and proportionally broad, slightly bulging, with one retromarginal and two promarginal teeth. *Palp:* Relatively simple, frequently with biramous tibial apophysis, but varying by enlargement or reduction (in some cases complete loss) of either ramus. Length of copulatory ducts in females seems to correlate with length of embolus in males. Epigynum usually with a pair of external pockets of various shape, located in various parts of the epigynum, missing in some species. In spite of differences in male and female genital organs, these structures show a number of similarities and can be arranged into morphoclines, connecting seemingly very different forms.

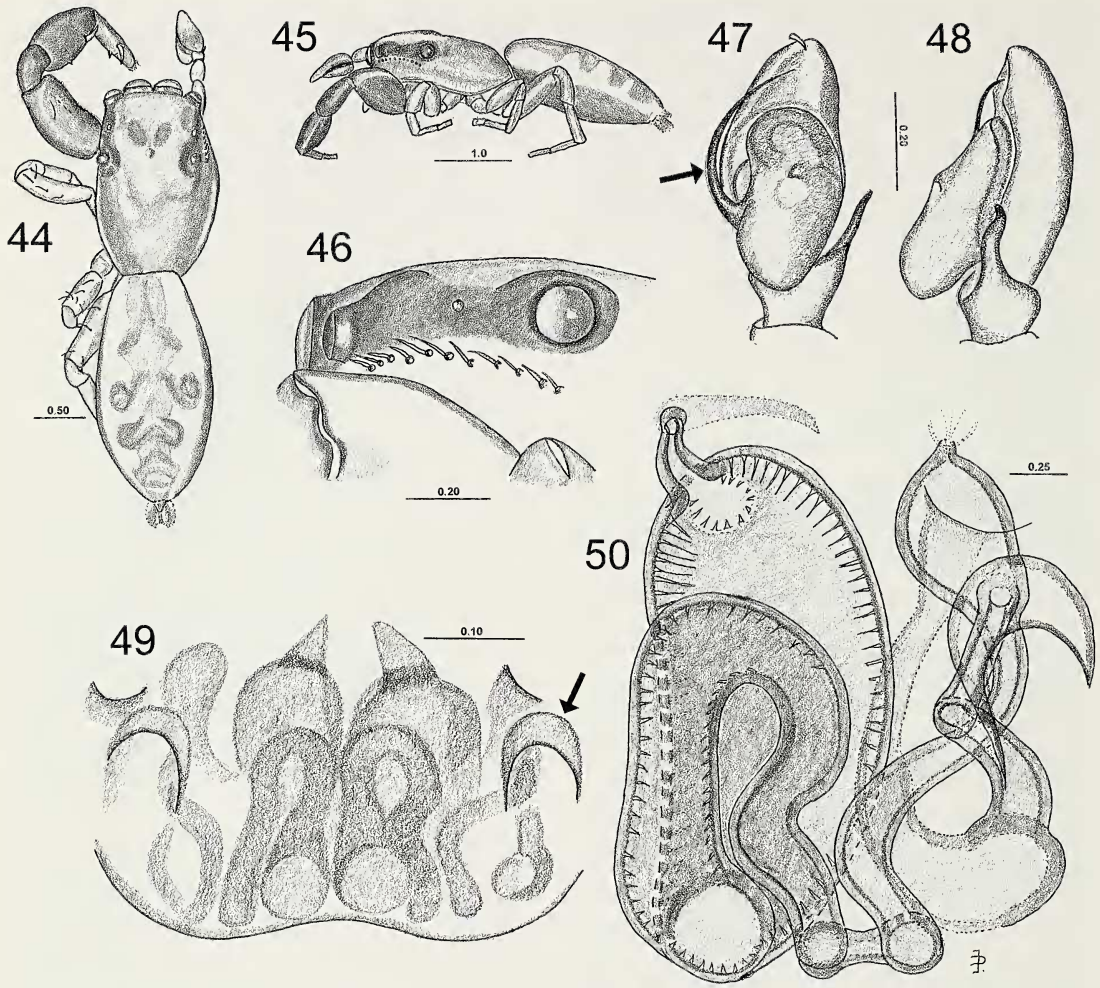
Pseudicius kraussi (Marples)
Figs. 44–52, 57, 58; Map 3

Flacilla kraussi Marples 1964, p. 405, fig. 5.
Flacillula kraussi: Brignoli 1983, p. 638.
Pseudicius samoaensis Prószyński 1992, p. 110–111, figs. 117–120 (NEW SYNONYMY).

Discussion.—Until now, *Pseudicius kraussi* has been known only from male specimens and *P. punctatus* (Marples 1957) only from females (see following species). With some doubt we assign a single female specimen from Eniwetok (Marshall Islands) to *P. kraussi*. The epigynal differences between this specimen and *P. punctatus* are relatively small, however; and the two species may be synonymous. We have too few specimens from any one locality to reveal the amount of epigynal variability. The other species of *Pseudicius* known from Eniwetok, *P. nuclearis* Prószyński 1992, is quite different from *P. kraussi* and *P. punctatus* in both sexes. *Pseudicius samoaensis* Prószyński 1992 agrees with *P. kraussi* in all characters. Marples's misplacement of *kraussi* in *Flacilla* is probably the reason for the description as a separate species by Prószyński.

Description.—*Male:* (n = 5). Total length 3.7–5.3 ($\bar{x}$ = 4.71), length of carapace 1.6–2.2 ($\bar{x}$ = 2.02), maximum carapace width 1.1–1.6 ($\bar{x}$ = 1.34), eye field length 0.8–1.1 ($\bar{x}$ = 0.97), eye row I width 0.9–1.1 ($\bar{x}$ = 1.03). Cephalothorax brown with darker eye field, median spot of white setae on anterior thoracic region, indistinct band of white setae along ventral margins of carapace. A row of 12 stridulatory spines on tubercles under lateral eyes (Fig. 46). Abdomen elongate oval, pale, with indistinct pattern of brownish spots, an indistinct marginal line of whitish setae (Fig. 51). Frontal aspect, clypeus very low, with a row of tiny, almost invisible colorless setae; chelicerae somewhat elongate, brown. *Legs:* Legs I long and robust, brown. Femur I with a compact row of five stridulatory tubercles with microspines, and two more distant, one distally, one above; tibia I brown, with single reduced spine prolaterally, a mid-ventral row of two minute papillate spines (Figs. 57, 58); remaining legs greyish-yellow, short and slender. Leg formula 1–4–3–2; patella-tibia III<IV. Patella-tibia I length 1.3–2.6 ($\bar{x}$ = 2.03). *Palp:* Of the *P. tamaricis* (Simon 1885b) type, from which *P. kraussi* differs in longer bulb and embolus, the latter more curved, also tibial apophysis is more curved (Figs. 47, 48) (*cf.* Prószyński 1987:52). Differs from *P. reiskindi* Prószyński 1992 in broader bulb, tibial apophysis longer, straighter, apically slightly hooked (Fig. 48).

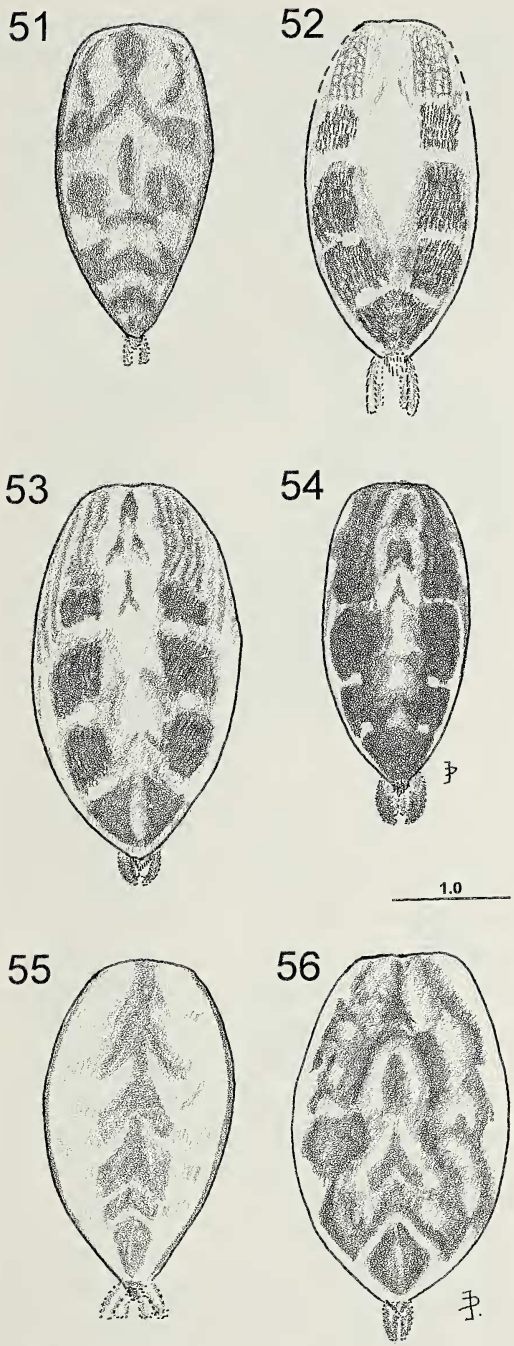
Female: (n = 1). Total length 4.8, length of carapace 2.1, maximum carapace width 1.5,



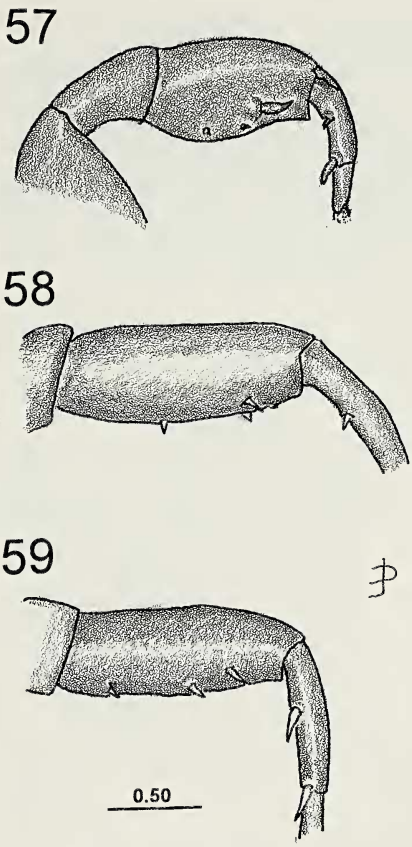
Figures 44–50.—*Pseudicius kraussi,* holotype male from Aitutaki, Cook Islands; female from Eniwetok, Marshall Islands. 44, Dorsal view of male; 45, Lateral view of male; 46, Lateral eyes and row of spines on papillae; 47, Palp ventrally, with arrow indicating embolus; 48, Palp laterally; 49, Epigynum, with arrow indicating anteriorly-placed sclerotized pocket; 50, Internal structure of epigynum, left single spermatheca and ducts.

eye field length 1.0, eye row I width 1.1. Virtually identical to male, except as follows: carapace and leg I lighter brown, dorsum of abdomen without brown median stripe, instead whitish flanked by broad V-shaped band crossed at middle of length and more posteriorly by narrow transverse white setal bands (Fig. 52). *Legs:* Leg I less robust than in male with only one ventral spine on tibia of right leg. Left leg I regenerated, smaller and without spines. Leg formula 4–1–3–2, patella-tibia III<IV. Patella-tibia I length 1.6. *Epigynum:* (Figs. 49, 50). Closely resembles that of *P. punctatus* but has sclerotized pockets placed more anteriorly (Figs. 49, 60).

Material examined.—**COOK ISLANDS**: *Aitutaki,* 1♂, *Flacilla kraussi* Marples (holotype), No. 10,211, 1961 (N.L.H. Krauss) (BPBM). **SAMOA**: *Mo'ata* near Apia, from mangroves, 18 March 1962 (R.W. Taylor), 1♂ (holotype), *Pseudicius samoaensis* Prószyński 1992 (MCZ). **MARSHALL ISLANDS**: *Eniwetok Atoll,* Libiron Islet, *Pisonia* forest, shaken from trees, 1♀ 7imm, 21 June 1969 (JWB). Libiron Islet, *Pisonia* forest, picked off trees, 1♂, 21 June 1969 (JWB). Japtan Islet, *Pisonia* forest, shaken from trees, 1♂, 30 June 1969 (JWB). Buganegan Islet, mixed forest, beaten onto sheet, 2♂ 3imm, 6 August 1969 (JWB). *Majuro Atoll,* Majuro Islet, coconut/breadfruit, shaken from trees, 1♂ 1imm, 2 August 1969 (JWB).



Figures 51–56.—Variation in abdominal pattern in Pacific species of *Pseudicius*. 51, *Pseudicius kraussi* holotype male from Aitutaki, Cook Islands; 52, *Pseudicius kraussi* female from Eniwetok, Marshall Islands; 53, *Pseudicius punctatus* female from Viti Levu, Fiji; 54, *Pseudicius punctatus* female from Viti Levu, Fiji; 55, *Pseudicius nuclearis* female from Kwajalein, Marshall Islands; 56, *Pseudicius nuclearis* female from Eniwetok, Marshall Islands. All drawings to same scale.



Figures 57–59.—Comparison of Leg I in males of Pacific species of *Pseudicius*. Note swelling of tibia and reduction of spines. 57, *Pseudicius kraussi* from Majuro (Marshall Islands); 58, *Pseudicius kraussi* holotype from Aitutaki, Cook Islands; 59, *Pseudicius nuclearis* from Kwajalein (Marshall Islands).

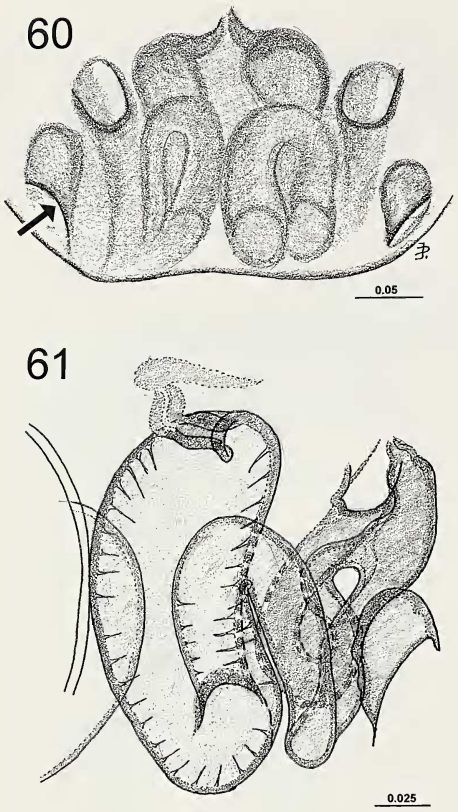
Distribution.—Marshall Islands, Cook Islands, and Samoa.

Pseudicius punctatus (Marples 1957)
Figs. 53, 54, 60, 61; Map 3

Savaiia punctata Marples 1957, p. 388.
Pseudicius punctatus: Prószyński 1990, p. 316.

Discussion.—Our specimens are externally similar to the holotype, but a little smaller. Epigynum of the holotype is larger and has longer narrow part of the copulatory duct, making an additional coil between branching to the accessory gland opening and the loop of the broader part (Fig. 61).

Description.—*Female:* (n = 4). Total length 3.7–5.0 ($\bar{x}$ = 4.47), length of carapace



Figures 60–61.—*Pseudicius punctatus* from Viti Levu, Fiji. 60, Epigynum, with arrow indicating postero-lateral pockets; 61, Internal structure of epigynum, with left spermatheca and ducts.

1.7–1.9 ($\bar{x}$ = 1.85), maximum carapace width 1.1–1.3 ($\bar{x}$ = 1.23), eye field length 0.8–0.9 ($\bar{x}$ = 0.86), eye row I width 0.9–1.0 ($\bar{x}$ = 0.99). Cephalothorax dorsally greyish-brown, with median thoracic streak and lower sides much lighter, yellow. Eye field medially darker, covered with delicate whitish adpressed setae; sides yellow, with indistinct, adpressed whitish setae. Ventral edge of carapace dark grey. The characteristic, lateral subocular row of stout setae on tubercles consists of 13 setae. Abdomen whitish-yellow with two broad, dark brown streaks, divided by light lines and white spots into three pairs of dark rectangular spots; there is also a single posterior dark, diamond-shaped spot. Median light streak split anteriorly by thin dark marks. Marginal whitish streaks with sparse reddish-brown setae, lower sides pigmented greyish-yellow, anteriorly and posteriorly suffused grey. Antero-lateral edges of abdomen with grey lines separated by chains of light spots. Frontal aspect with anterior eyes surrounded ventrally and laterally with white setae, dorsally with finer inconspicuous fawn setae; clypeus with longer white setae. Chelicerae yellow, with a vertical median line suffused grey. Pedipalps pale yellow with long white sparse setae. Ventral aspect light whitish-yellow, sternum with grey margin, abdomen whitish. *Legs:* Legs I yellow, tibia-tarsus I fawn; tibia I with single reduced prolateral spine (rarely two); no retrolateral spines. Leg formula 4–1–3–2, patella-tibia III<IV. Patella-tibia I length 1.0–1.1 ($\bar{x}$ = 1.07). *Epigynum:* Indistinct sclerotized plate with inconspicuous copulatory openings located antero-laterally, and a pair of sclerotized pockets, located postero-laterally (Fig. 60); large coils of spermathecae and parts of ducts are visible through the translucent cuticle. Spermathecae large, vesicular; posterior loop of ducts almost as long as spermatheca itself (Fig. 61).

Male: The male is unknown.

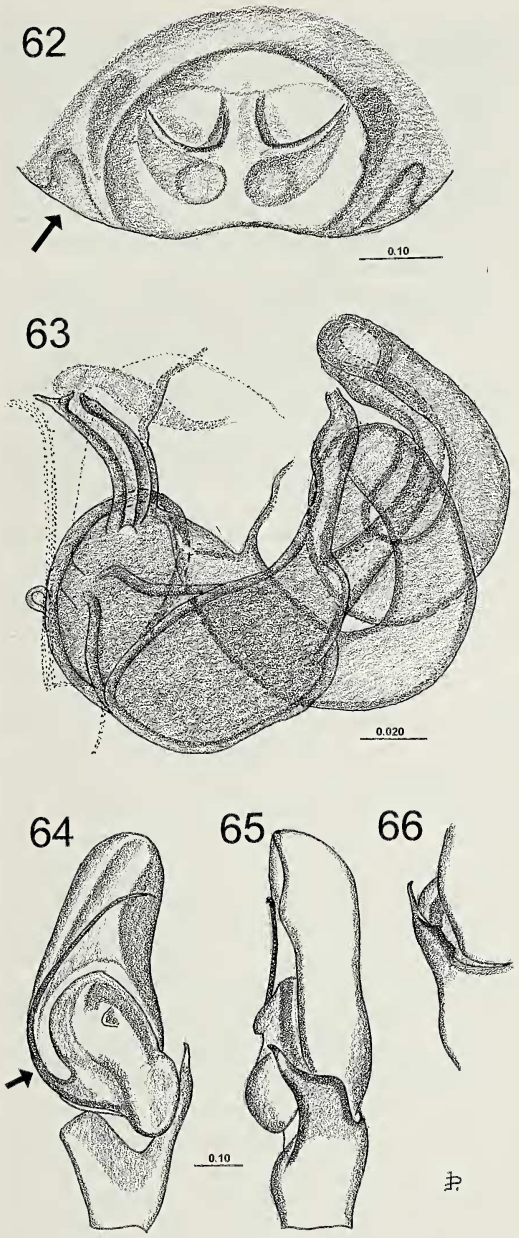
Material examined.—FIJI: *Viti Levu,* Lauthala Bay, mangrove, 3♀, 29 May 1987 (JWB & ERB). **SAMOA**: *Savaii,* 1♀, *Savaiia punctata* (holotype), (Krauss) (BPBM). **CAROLINE ISLANDS**: *Palau,* Malakal, grassy field, 1♀, 17 April 1973 (JAB & JWB).

Distribution.—Known only from Fiji, Samoa, and from Palau in the Caroline Islands.

Pseudicius nuclearis Prószyński 1992
Figs. 55, 56, 59, 62–66, Map 3

Discussion.—This species has been found only on atolls with a strand-type flora and a fauna that is relatively depauperate. The female is here described for the first time.

Description.—*Male:* (n = 1). Total length 5.3, length of carapace 2.3, maximum carapace width 1.6, eye field length 1.0, eye row I width 1.3. Cephalothorax brown, white along ventral edge, with small whitish setae on eye field and making median streaks on thoracic region; sides with brown setae, 10 spines below lateral eyes. Face brown with narrow clypeus, edged with short stout white setae; setae around the anterior eyes dorsally white, laterally indistinct fawn. Abdomen whitish with brown median streak, flanked anteriorly by a pair of white spots, slightly expanded medially, sides light brown. Ventral



Figures 62–66.—*Pseudicius nuclearis,* female from Eniwetok, male from Kwajalein, Marshall Islands. 62, Epigynum, with arrow indicating posterior pockets; 63, Internal structure of epigynum, with right spermatheca and ducts; 64, Palp ventrally, with arrow showing embolus arising at 8 o'clock position; 65, Palp laterally; 66, Tibial apophysis antero-dorsally.

aspect light brown, abdomen light greyish-brown. *Legs:* Legs I more robust and brown, remaining legs yellow, tibia I long, slightly swollen in the posterior half. Ventral spines reduced, three prolateral, one retrolateral in basal position (Fig. 59). Pedipalps yellow, with long white setae on tibia and patella, femur with dorsal white setae apically. Leg formula 1–4–3–2, patella-tibia III<IV. Patella-tibia I length 2.0. *Palp:* (Figs. 64–66). Dorsal ramus straight dorsally ending in a pronounced angle. Bulb oval, set a little diagonally, with slightly expanded basal part, embolus arising at the 8 o'clock position, and running laterally along bulb and extending anteriorly to it about ½ of the bulb length. With long white setae laterally on tibia, dorsally on tibia and proximal half of cymbium.

Female: (n = 5). Total length 4.5–6.1 ($\bar{x}$ = 5.37), length of carapace 2.0–2.3 ($\bar{x}$ = 2.18), maximum carapace width 1.5–1.7 ($\bar{x}$ = 1.55), eye field length 0.9–1.1 ($\bar{x}$ = 1.03), eye row I width 1.2–1.4 ($\bar{x}$ = 1.27). Color pattern as in male, but lighter brown. Dorsal stripe narrower than in male, not darker than other dorsal markings. Abdominal pattern (Figs. 55, 56) more diffuse and indistinct in egg-laden specimens. *Legs:* Leg formula 4–1–3–2, patella-tibia III<IV. Patella-tibia I length 1.4–1.6 ($\bar{x}$ = 1.44). *Epigynum:* An indistinct shallow, oval depression with two anterior grooves, relatively deep, separated by a broad ridge (Fig. 62); two posterior pockets, relatively long; resembles *Pseudicius courti* (Żabka 1993) (figs. 5b, c), from which it differs by longer pockets and narrower ridge, longer posterior rim of the grooves. Internal structures, visible through weakly sclerotized cuticle, consist of the copulatory duct running from the copulatory opening dorsally to spermatheca, then making two coils around its posterior part, the bend of the last coil is moved far anteriorly (Fig. 63).

Material examined.—MARSHALL ISLANDS: *Kwajalein Atoll,* Ennylabegan Islet, beach rubble, 1♂ 1imm, 7 July 1969 (JWB); Ennylabegan Islet, on building, 1♀, 25 July 1969 (JWB). *Eniwetok,* Rigili I., clearing in *Pisonia* forest, 1♀, 2 July 1968 (JWB); Buganegan Islet, in *Scaveola* twigs, 1♀, 6 August 1968 (JAB & JWB); Igurin Is., 1♀, 18 July 1968. **CAROLINE ISLANDS**: *Ulithi,* Falalop, coconut forest, litter, 1♀, 2 May 1980 (JWB).

Map 4.—Distribution of seven species of *Sobasina* in the Pacific. ***Sobasina aspinosa*** new species (♦), ***Sobasina coriacea*** new species (■), ***Sobasina cutleri*** new species (●), ***Sobasina platypoda*** new species (○), ***Sobasina magna*** new species (□), ***Sobasina paradoxa*** new species (☆) and ***Sobasina yapensis*** new species (★).

Distribution.—Known only from the Marshall Islands and the Caroline Islands.

Genus *Sobasina* Simon 1897
Map 4

Type species *Sobasina amoenula* Simon 1897, p. 297, from Solomon Islands, Vanikoro; in MNHN, Paris.

Discussion.—The genus, first described by Simon in 1897, was based on the single species *S. amoenula*; but Wanless (1978) has been the major contributor to it, adding five species. The present study describes seven new species and gives data on geographic distribution. There are striking differences in development and spination of tibia I: in one species elongate and thin, without any spines; in another with spines limited to anterior half of tibia; in the majority of species with 3–6 ventral spines in each of two rows, evenly distributed along either a cylindrical, narrow tibia, or one that is compressed and expanded ventrally into a semicircular plate-like segment, which has a thin brush of dark, long, flattened setae. Species with ventral setae have the dorsal surface of tibia I broadened. It is peculiar that a similarly semicircular compressed tibia I, with a similar brush of long, flattened setae, occurs in a species of *Efate*, found on the same island (Viti Levu, Fiji). The number of ventral spines in the rows on tibia I varies in different species from 2–6, to none in *Sobasina aspinosa* new species, where the segment is very long and thin. *Sobasina magna* new species is much larger than the remaining species, is much broader, and may not be an ant mimic. All of this makes the genus an exciting object for comparative studies in many aspects.

Diagnosis.—Ant-like (except *S. magna*), fissident salticids of small to medium size. The only other fissident ant mimics in the Pacific are *Efate* Berland 1938 and *Rarahu* Berland 1929. *Rarahu* differs from *Sobasina* by having leg spines on metatarsus I and none elsewhere. *Efate* differs in the male by the meandering sperm reservoir of the palp (reservoir making a simple circuit around the bulb in *Sobasina* (see Fig. 71)). In the female, *Sobasina* has long spermathecae (Fig. 70) and usually an indistinct epigynum (Fig. 69). The spermathecae of *Efate* are short and the epigynum distinct, with a median posterior arch or emargination. The carapace of the female *Sobasina* also has humps and depressions.

Descriptive notes.—Small to medium size, usually ant-like, fissident jumping spiders, appearing smaller than they are, because of the narrowness of the body, low cephalothorax and slender legs. Cephalothorax flat; females but not males with a constriction just behind the eyes. Cephalothorax strongly sclerotized and shiny, covered densely with small, hemispherical warts. A scutum may cover all or part of the abdominal dorsum. Setae sparse and inconspicuous, except for a ventral brush on tibia I in some species; there are conspicuous dense setae ventrolaterally on last segment of pedipalps in both sexes of some species. Abdominal constriction accentuated in some species by a white ring, line or spot. Thoracic constriction and/or slope in some species lighter, sometimes with a few short white setae. Face usually without contrasting marks, anterior eyes in a straight line, diameter of AME twice that of ALE, clypeus very low. Chelicerae small (except *S. magna*), with one bicusp retromarginal tooth and two promarginal teeth (*S. magna* has an additional retromarginal tooth). Distal segments of female pedipalp flattened, tarsus broadened with a prolateral fringe of dark setae. Palpal bulb a simple oval, with very short apical embolus and simple loop of sperm reservoir duct, tibial

apophysis simple, single, about half length of the bulb or less. Epigynum very small, its internal structure peculiar because of the presence of a chain of small chambers or a thick walled, duct-like structure, which apparently is a modified spermatheca.

KEY TO SPECIES OF *SOBASINA* SIMON 1897
(expanded from Wanless (1978))

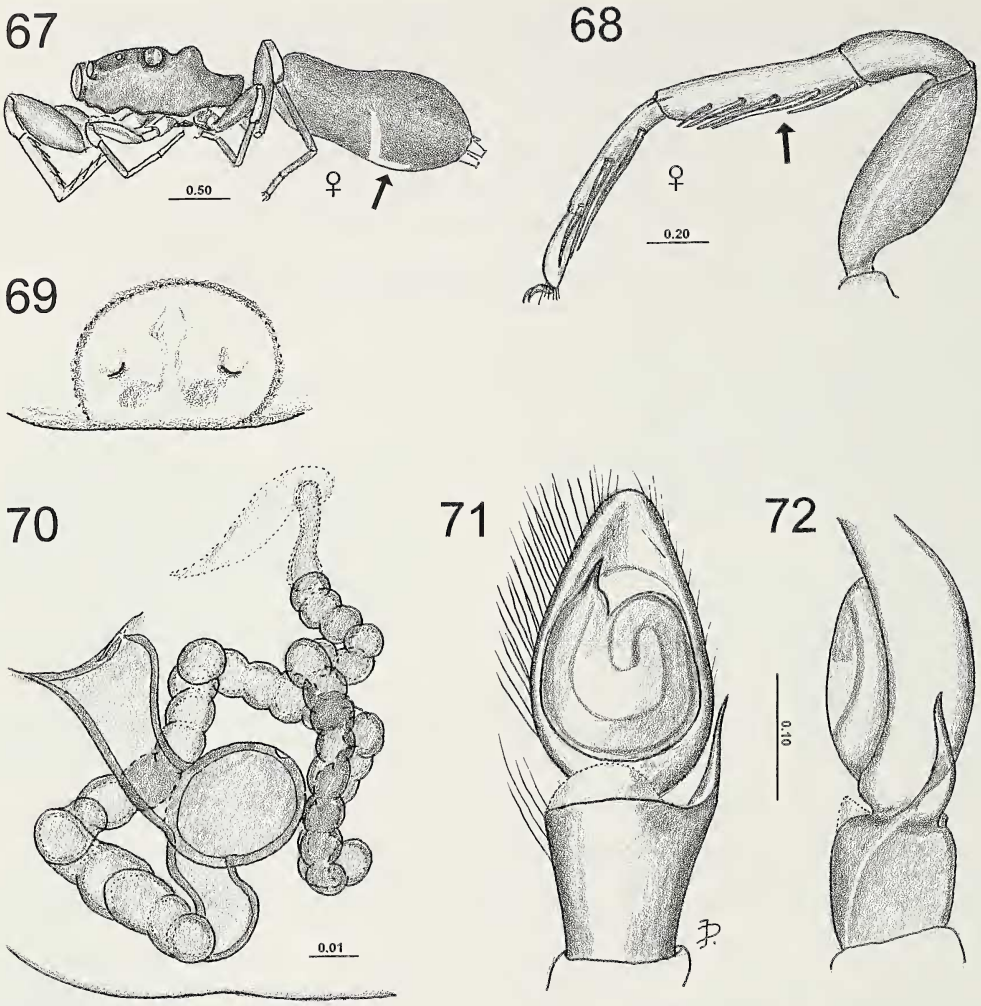
1. Tibia I with dense ventral fringe of flattened black setae (Fig. 75); ventral spines 3–5 in outer row, 1–4 in inner row . . . 2
   Tibia I without ventral fringe of setae (Fig. 68), ventral spination variable . . . 5
2. Tibia I short and thick (length only twice depth), flat-topped, with distinct angle between dorsal and lateral surface (Fig. 75). Fiji . . . *platypoda* new species
   Tibia length more than twice depth, not flattened or angular . . . 3
3. Eye region finely rugulose anteriorly to granulate posteriorly; thoracic sides granulate. Only male known. Solomon Islands: Rennell . . . *hutuna* Wanless
   Eye region granulate; thoracic sides irregularly punctured . . . 4
4. Thoracic hump high (Wanless 1978, fig. 3D); thoracic punctures very numerous. New Hebrides (=Vanuatu): Tanna, Efate, Espiritu Santo . . . *tanna* Wanless
   Thoracic hump low (Wanless 1978, fig. 3B); thoracic punctures less numerous. Solomon Islands: Guadalcanal . . . *solomonensis* Wanless
5. Ventral spines of tibia I absent or in two rows of 2–3 spines each in distal half of tibia (Wanless 1978, fig. 3C) . . . 6
   Ventral spines of tibia I in two rows of 3–6 spines each, occupying most of tibial length . . . 8
6. Tibia I without ventral spines. Fiji . . . *aspinosa* new species
   Tibia I with 2–2 to 2–3 ventral spines in distal half . . . 7
7. Abdomen with dorsal and ventral scuta (Wanless 1978, fig. 7B); chelicerae apparently normal, total length 3.24 mm. Only male known. Bismarck Archipelago . . . *scutata* Wanless
   Abdomen without scuta; chelicerae slightly concave anteriorly, carinate laterally (Fig. 93), with one promarginal tooth greatly enlarged; length 7.0 mm. Only female known. Tonga . . . *magna* new species
8. Eye region with conspicuous punctures (Wanless 1978, plate 1e) . . . 9
   Eye region without conspicuous punctures, rugulose to granulate. Length 2.0–3.7 . . . 10
9. Only eye region and sides of thoracic region conspicuously punctate; length 3.1–5.0 mm (mostly 3.9–5.0). Fiji . . . *cutleri* new species
   Entire carapace conspicuously punctate; length 2.1–3.0 mm; Fiji . . . *paradoxa* new species
10. Eye region rugulose anteriorly, granulate posteriorly. Only female known. Solomon Islands: San Cristobal (Makira) and Vanikoro . . . *amoenula* Simon
    Eye region granulate (Wanless 1978, plate 1a) . . . 11
11. Clypeus densely white-haired. Only male known. Solomon Islands: Kolombangara . . . *alboclypea* Wanless
    Clypeus not white-haired . . . 12
12. With a dark prolateral stripe on patella and tibia I. Female abdomen slightly constricted with a single incomplete transverse white band at the constriction (Fig. 67). Male with dorsal abdominal scutum partly divided at the abdominal constriction. Caroline Islands: Yap . . . *yapensis* new species
    No dark prolateral stripe on patella and tibia I. Female abdomen markedly constricted with two transverse white bands, one at the constriction, one further forward (Fig. 81). Male abdomen unconstricted, the scutum undivided (Fig. 80). Caroline Islands: Palau . . . *coriacea* new species

Sobasina yapensis new species
Figs. 67–72, Map 4

Holotype.—Male from Caroline Islands, Yap, Fanif, shaken from dead lower banana leaves, 16 April 1980 (J.A. Beatty & J.W. Berry) (BPBM).

Etymology.—The species is named after the Yap group of islands in which it occurs.

Diagnosis.—The absence of a ventral fringe of setae from tibia I, the ventral spines of tibia I in two rows of 3–6 spines each, and the entirely granulate eye region (nowhere punctate or rugulose) distinguishes *S. yapensis* from all other species of the genus except *S. alboclypea* and *S. coriacea*. Absence of a band of white hairs on the clypeus (in both



Figures 67–72.—***Sobasina yapensis*** new species from Yap, Caroline Islands. 67, General appearance of female, with arrow indicating white diagonal line on abdomen; 68, Leg I of female, with arrow indicating tibial spines; 69, Diagram of epigynum (too small to observe details); 70, Internal structure of epigynum, showing right spermatheca and duct; 71, Palp of holotype male, ventrally; 72, Palp of holotype, laterally.

sexes) distinguishes it from *S. alboclypea* (known only from males). Quite similar to *S. coriacea,* from which it differs by having a retrolateral dark stripe on patella and tibia I, having a single transverse white abdominal band at the constriction of the abdomen, this band incomplete at the middle in females, and having the male abdominal scutum somewhat indistinct and partially divided at the constriction of the abdomen. Genitalic differences are more clearly indicated by the illustrations (Figs. 70–72, 76–79) than verbally.

Description.—*Male:* (n = 5). Total length 2.1–2.3 ($\bar{x}$ = 2.22), length of carapace 1.0–1.1 ($\bar{x}$ = 1.03), maximum carapace width 0.65–0.68 ($\bar{x}$ = 0.67), eye field length 0.6–0.7 ($\bar{x}$ = 0.63), eye row I width 0.6–0.7 ($\bar{x}$ = 0.64). Cephalothoracic region without constriction behind eyes, or with only trace of it; chestnut brown with black pigment around lateral eyes and a small brown area between PME and PLE. Abdomen brownish dorsally, well sclerotized and shiny, with indistinct constriction in anterior half of abdomen, marked by a thin, white transverse line across dorsal and lateral surfaces of abdomen, interrupted dorsally and continuing along sides about halfway to end of abdomen. Face brown, ped-

ipalps light brown. *Legs:* Legs I, femur brown; tibia, patella and metatarsus yellow, thin, with darker, brown line along ventro-retrolateral edge, tibia I with (4 to 5)–(3 to 4) long ventral spines, of which the two median pairs are longer, metatarsus with three pairs of long spines. Remaining legs yellow, with femora III and IV brown. Leg formula 1–4–3–2, patella-tibia III<IV. Patella-tibia I length 0.6–0.8 ($\bar{x}$ = 0.72). *Palp:* Palpal tibia with single apophysis, relatively long bulb with anterior shoulder (Figs. 71, 72).

Female: (n = 5). Total length 2.9–3.2 ($\bar{x}$ = 3.05), length of carapace 1.2–1.3 ($\bar{x}$ = 1.25), maximum carapace width 0.7–0.8 ($\bar{x}$ = 0.77), eye field length 0.7–0.8 ($\bar{x}$ = 0.76), eye row I width 0.73–0.75 ($\bar{x}$ = 0.74). Cephalothoracic region with surface covered with small round warts, shiny, especially on eye field; chestnut brown with lateral eyes surrounded by black pigment, and a small brown area between PME and PLE. In comparison with *S. platypoda* new species broader, shorter, higher, PLE more protruding, depression behind eye field (Fig. 67) deeper but shorter, all thoracic region uniformly colored chestnut brown. Face brown, pedipalps light brown. Differs from *S. platypoda* new species in having tibia I long and narrow, without sclerotized edges. Abdomen dark grey, with indistinct constriction in anterior half of abdomen, marked also with a white diagonal line across lower sides. Mouth parts, sternum and coxae IV light brown, remaining coxae dark yellow, trochanters II-IV whitish; abdomen ventrally dark grey except short white line at the mid-length of marginal edge (Fig. 67). *Legs:* Legs I as in male, except tibial spines (5 to 6)–(4 to 5) (Fig. 68). Remaining legs with femora (especially III and IV) brown, whitish patellae, coxae and tarsi; tibiae and metatarsi darker yellow. Leg formula 1–4–3–2, with patella-tibia III<IV. Patella-tibia I length 0.8–0.9 ($\bar{x}$ = 0.84). *Epigynum:* Too small and indistinct to be clearly drawn, its structure shown in Figs. 69, 70. Spermatheca and its posterior duct-like part longer than in *S. coriacea,* moniliform for most of its length.

Material examined.—CAROLINE ISLANDS: *Yap,* Fanif, shaking dead banana leaves, 1♂1♀, 16 April 1980 (JAB & JWB). Fanif, tree shaking, 2♀, 16 April 1980 (JAB & JWB). Wanyan, dead coconut fronds, 2♂1♀ 1imm, 17 April 1980 (JAB & JWB). Wanyan, tree shaking, 1♀ 2imm, 16 April 1980 (JAB & JWB). Gilman, beach litter, 2♂1♀, 15 April 1980 (JAB & JWB). Gilman Point, beach litter, 2♂1♀, 29 May 1980 (JAB & JWB). Gilman Point, coconut undergrowth, 2♀, 29 May 1980 (JAB & JWB).

Distribution.—Known only from Yap in the Caroline Islands.

Sobasina platypoda new species
Figs. 73–79, Map 4

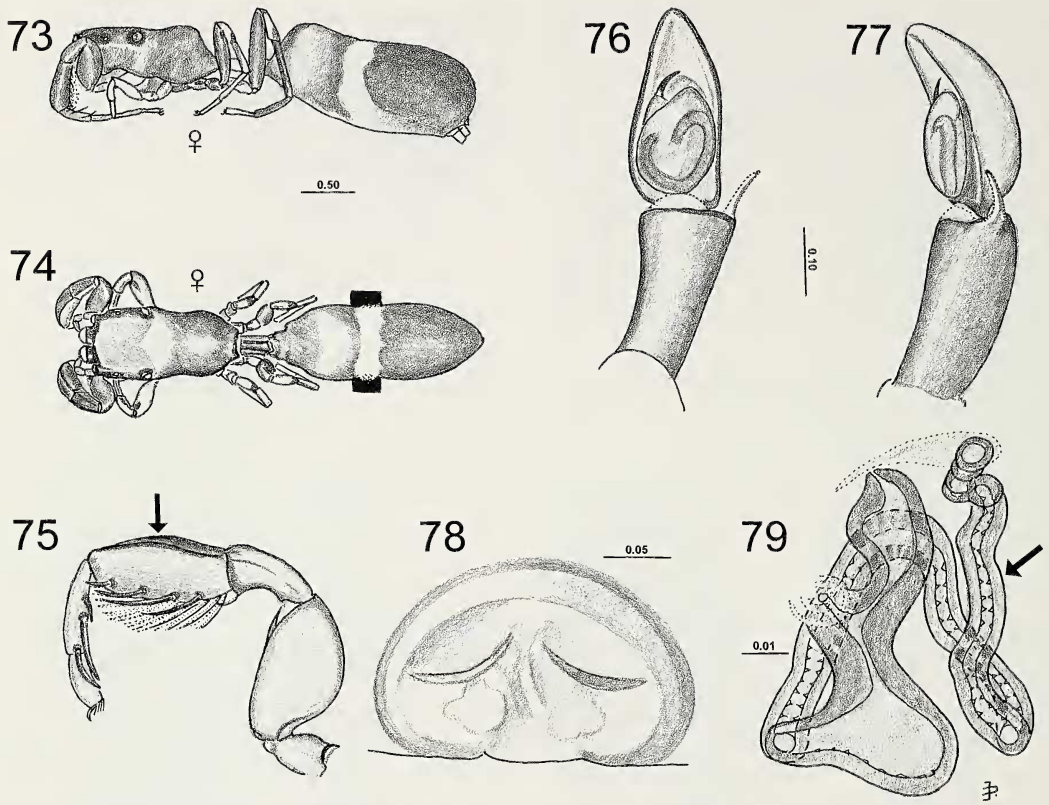
Holotype.—Male from Fiji, Viti Levu, 22.4 km W of Suva, forest sweeping and shaking, 5 May 1987 (J.W. Berry & E.R. Berry) (BPBM).

Etymology.—The name *platypoda,* flat-footed, is based on the flattened dorsum of tibia I in both sexes (Fig. 75).

Discussion.—In contrast to other species which have considerable sexual dimorphism, both sexes in this species are quite similar (with exception of the leg length order; in males the first legs are longer, in females the fourth). The white line inside the abdominal constriction varies in width, and may be interrupted dorsally, but is present in both sexes. External appearance and tibia I very similar to *Efate raptor* (Berry et al. 1996) with which *S. platypoda* could at first be confused.

Diagnosis.—Distinguished from all other species of the genus by the fringe of flattened setae ventrally on tibia I and the short, deep tibia I with flattened dorsal surface and angular junction of its dorsal and lateral surfaces (Fig. 75). Not close to any other species of the genus in structure of first leg. Spermatheca and duct long, not moniliform (Fig. 79). Male palp (Figs. 76, 77) virtually indistinguishable from that of most other known males of the genus (see Fig. 92 and Wanless (1978) figs. 4A, 4I, 6E, 8D, and 8E).

Description.—*Male:* (n = 5). Total length 2.6–3.1 ($\bar{x}$ = 2.99), length of carapace 1.1–1.4 ($\bar{x}$ = 1.33), maximum carapace width 0.5–0.7 ($\bar{x}$ = 0.67), eye field length 0.5–0.7 ($\bar{x}$ = 0.69), eye row I width 0.5–0.7 ($\bar{x}$ = 0.63). Cephalothoracic region long and low, with surface shiny, especially on eye field covered with small round warts; chestnut brown with lateral eyes surrounded by black, a small brown area between PME and PLE; a patch of white adpressed setae on sides of cephalothorax above coxa II. Abdomen anteriorly light grey, posteriorly darker, divided by a distinct constriction and a broad white ring or a



Figures 73–79.—***Sobasina platypoda*** new species from Viti Levu, Fiji. 73, Lateral view of female; 74, Dorsal view of female (black marker to emphasize white abdominal banding); 75, Leg I, showing fringe on tibia and angular junction of dorsal and lateral surfaces; 76, Palp of holotype male, ventrally; 77, Palp of holotype male, laterally; 78, Epigynum; 79, Internal structure of epigynum, showing chamber of right spermatheca and thicker-walled duct-like posterior extension of spermatheca.

thin line. Pedipalps light brown. *Legs*: Tibia I distinctly broad and short, with sclerotized edge. Legs I brown except two terminal segments which are whitish-yellow, differing from *Sobasina yapensis* new species in having tibia I shorter but twice broader dorsally, with sclerotized edges, somewhat swollen ventrally, with dense row of long dark setae along ventral surface, between two rows of 4 to 5 ventral spines. Leg II entirely whitish, legs III and IV with femora and tibiae brown, metatarsi dark yellow, tarsi and patellae whitish, the latter with apical darker spot. Sternum and coxae of legs III-IV chestnut brown, remaining coxae dark yellow to brown, trochanters I-III brown, but white on IV. Leg formula 1≃4–3–2, patella-tibia III<IV. Patella-tibia I length 0.5–1.0 ($\bar{x}$ = 0.89). *Palp:* Proportions of pedipalps differ from other species in having tibia longer and thinner; embolus short and curved, located slightly more posteriorly, slightly protruding in front of apex of the bulb and parallel to it; tibial apophysis smaller and thinner, sometimes transparent (Figs. 76, 77).

Female: (n = 5). Total length 3.3–3.8 ($\bar{x}$ = 3.58), length of carapace 1.3–1.5 ($\bar{x}$ = 1.41), maximum carapace width 0.7–0.8 ($\bar{x}$ = 0.71), eye field length 0.6–0.8 ($\bar{x}$ = 0.72), eye row I width 0.6–0.7 ($\bar{x}$ = 0.67). Sexes are remarkably similar to each other, an exception in this genus. Cephalothorax narrower, longer, lower than in females of *Sobasina yapensis* new species, PLE less protruding, depression behind eye field shallower but longer, lighter colored, from it a slightly lighter streak runs to the thoracic rear margin. *Legs:* Leg formula 4–1–3–2, patella-tibia III<IV. Patella-tibia I length 0.7–1.0 ($\bar{x}$ = 0.87). *Epigynum:* So small that the drawing (Fig. 78) gives only its approximate shape; internal structure differs by constriction of spermatheca into two chambers

and shape of the thicker walled duct-like posterior extension of spermatheca (Fig. 79).

Material examined.—FIJI: *Viti Levu,* Suva, Queen Elizabeth Drive, on mangrove leaf, 1♀, 9 May 1987 (JAB). Forest sweeping & shaking, 22.4 km W of Suva city, 1♂, 5 May 1980 (JWB & ERB). Lami, 0–350 m, 2♂, March 1978 (N.L.H. Krauss). SW of Lami, 9 km W of Suva, cut-over forest, 1♀ 1imm, 23 May 1987 (JWB & ERB). About 5 miles W of Nausori, Nanduruloulou Research Station, 1♀, 15 May 1980 (JAB). Nausori Highlands Forest Reserve, Leveitoko Block, elev. 1500 ft., shaking/picking, 2♂1♀, 27 May 1987 (JWB & ERB). Nausori, Koronivia Research Station, sweeping & shaking trees, 1♂1♀, 8 May 1987 (ERB). Nandarivatu, 1100 m., 1♀ 1imm, 23 December 1963 (J.L. Gressitt) (BPBM). Nandarivatu, 1♀ 1imm, 1 November 1938 (E.C. Zimmerman) (BPBM). Nandarivatu, 2700 ft, 1♂, 18 July 1938 (E.C. Zimmerman) (BPBM). Nandarivatu, on shrub, elev. 900 m, 1♂1♀, 11 April 1987 (JAB). Nandala creek, 2 mi. S of Nandarivatu, sweeping & shaking, 3♂2♀ 2imm, 12 April 1987 (ERB). Nandarivatu, pine/shrub forest beside guesthouse, sweeping & shaking, elev. 800 m., 1♀ 1imm, 14 May 1987 (JWB & ERB). Nandarivatu, 2700 ft., 1♂, 18 July 1938 (BPBM). Nandarivatu, 1♀, 1 September 1938 (E.C. Zimmerman) (BPBM). Tholo-I-Suva Forest Park, Waisila Falls Trail, sweeping, 1♂ 1imm, 11 May 1987 (JWB). Tholo-I-Suva, 1♀ 1imm, 27 July 1938 (BPBM). 7 mi. N of Singatoka, sweeping/shaking shrubs along river, 1♂, 21 May 1987 (JWB & ERB). Hill forest about 8 miles NE of Navua, tree shaking, 1♂, 2 May 1987 (JWB & ERB). Belt Road, 2♀, 22 July 1938 (BPBM). Lami, 0–350 m, 1♂, March 1978, (N.L.H. Krauss) (BPBM). *Ovalau,* Levuka, 1♀, December 1969 (N.L.H. Krauss) (BPBM). Wai-ni-loka, 1♀, 11 July 1938 (Z-45) (BPBM). Levuka, 1♀, December 1969 (Krauss) (BPBM).

Distribution.—Known only from Viti Levu and Ovalau islands of Fiji.

Sobasina coriacea new species
Figs. 80–85, Map 4

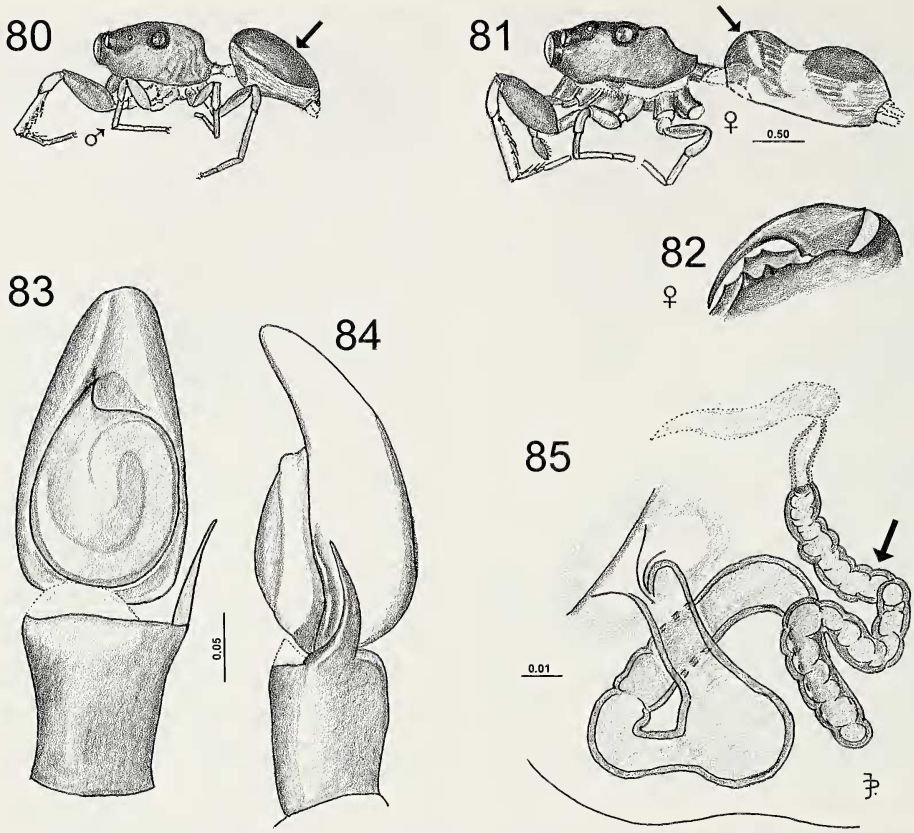
Holotype.—Holotype female from Palau: Koror Island, Entomology Lab., banana trash below lab (in ravine), 9 March 1973 (J.W. Berry & J.A. Beatty).

Etymology.—The species name *coriacea,* leathery, is given because of the presence of a dorsal abdominal scutum in the male.

Diagnosis.—The lack of ventral setal fringe on tibia I, ventral spination of tibia I (5-(4 to 5)) and eye region uniformly granulate distinguish *S. coriacea* from all other species of the genus except *S. alboclypea* and *S. yapensis.* From *S. alboclypea* (known only from males) it is separated by the absence (in both sexes) of a band of white setae on the clypeus. The female differs from that of *S. yapensis* by having two transverse white bands on the abdomen, one across the abdominal constriction and another more anterior (Fig. 81) (single incomplete band at the constriction in *S. yapensis*), by the absence of a dark prolateral stripe on tibia and patella I and by the shorter epigynal duct plus spermatheca, which is moniliform for about half its length (Fig. 85). The male of *S. coriacea* has a distinct undivided abdominal scutum, unconstricted abdomen (Fig. 80), and no dark prolateral stripe on tibia and patella I. (Scutum somewhat indistinct and divided, abdomen constricted aand dark stripe present on tibia and patella I in *S. yapensis.*)

Description.—*Male:* (n = 5). Total length 2.0–2.3 ($\bar{x}$ = 2.07), length of carapace 1.0–1.1 ($\bar{x}$ = 1.01), maximum carapace width 0.6–0.7 ($\bar{x}$ = 0.67), eye field length 0.5–0.7 ($\bar{x}$ = 0.60), eye row I width 0.6–0.7 ($\bar{x}$ = 0.67). Cephalothorax sloping abruptly behind eye field, its dorsal surface slightly rounded; no dorsal depression like that in female, but pigmentation difference makes some appearance of it. Surface of eye field covered with minute warts. Cephalothorax light chestnut brown, with black around lateral and anterior eyes, eye field darker; irregular grey lines radiating from front to edge of the thoracic region. Abdomen covered with shiny scutum, brown, without constriction or white transverse line. Sides with a dark grey linear pattern, separated by chains of small, lighter dots. *Legs:* Legs II-IV brownish-yellow, femora IV with darker lateral streak along apical half; Legs I with femur and basal part of metatarsus dark brown, tibia long, thin with two rows of ventral spines of 4 to 6 spines each, the 2nd and 3rd being very long, metatarsus I with three pairs of long ventral spines. Leg formula 1–4–2–3, patella-tibia III<IV. Patella-tibia I length 0.6–0.8 ($\bar{x}$ = 0.71). *Palp:* Bulb of palp (Figs. 83, 84) lacking the projecting shoulder, lateral to the embolus, found in most other species.

Female: (n = 5). Total length 2.3–3.0 ($\bar{x}$ = 2.67), length of carapace 1.1–1.3 ($\bar{x}$ = 1.21), maximum carapace width 0.7–0.8 ($\bar{x}$ = 0.74), eye field length 0.7–0.8 ($\bar{x}$ = 0.73), eye row



Figures 80–85.—***Sobasina coriacea*** new species from Palau, Caroline Islands. 80, Lateral view of male, with arrow indicating undivided abdominal scute and unconstricted abdomen; 81, Lateral view of holotype female, with arrow indicating anterior abdominal white band; 82, Cheliceral dentition of holotype female; 83, Palp ventrally; 84, Palp laterally; 85, Internal structure of epigynum of holotype, showing right spermatheca and duct, with arrow indicating the moniliform nature of duct (epigynum itself too indistinct to illustrate).

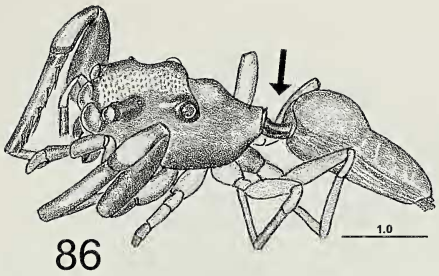
I width 0.7–0.8 ($\bar{x}$ = 0.75). Resembles females of S. *amoenula* and *yapensis*. *Legs:* Leg formula 4–1–3–2, patella-tibia III<IV. Patella-tibia I length 0.7–1.0 ($\bar{x}$ = 0.87). *Epigynum:* Internal structure resembles that in *Sobasina yapensis* new species, from which *coriacea* differs by the shorter posterior, duct-like part of the spermatheca which is moniliform for only half its length or less (Fig. 85). An indistinct swelling of the entrance duct just behind the copulatory opening comparable to that in *S. yapensis* new species.

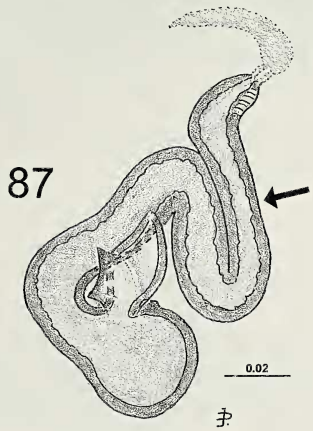
Material examined.—CAROLINE ISLANDS: *Palau,* Koror, taro patch litter, 1♂2♀, 26 March 1973 (JWB & JAB). Koror, taro patch litter, 1♂, 30 March 1973 (JAB & JWB). Koror, banana trash below lab (in ravine), 1♀ (holotype), 9 March 1973 (JAB & JWB). Koror, scrub forest in vacant lot, grass litter, 1♂, 13 February 1973 (JWB). Koror, vacant lot, grass litter, 1♂ 1imm., 15 February 1973 (JWB). Koror, vacant lot, litter, 1♀, 13 March 1973 (JWB & JAB). Koror, compost pile, 1♂, 30 March 1973 (JWB & JAB). Koror, taro patch #2, litter, 1♂ 1imm, 3 April 1973 (JAB & JWB). Arakabesan, mixed tropical forest litter, elev. 20 ft., 1♂, 28 February 1973 (JWB). Babelthuap, Airai, betel palm fronds, 1♀, 11 March 1973 (JAB & JWB). Babelthuap, Airai, tropical forest, 1♀, 27 March 1973 (JAB & JWB). Peleliu, rock island forest litter, 1♂2♀ 2imm, 22 March 1973 (JWB & ERB).

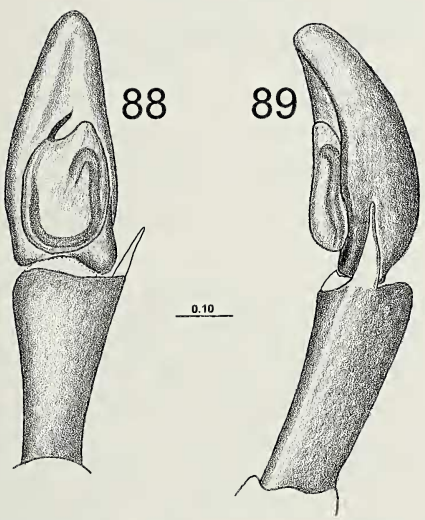
Distribution.—Known only from the Palau group of the Caroline Islands.

Sobasina cutleri new species
Figs. 86–89, Map 4

Holotype.—Male from Fiji, Viti Levu, Nandarivatu, 870 m, 9 January 1987 (N.I. Platnick) (AMNH).







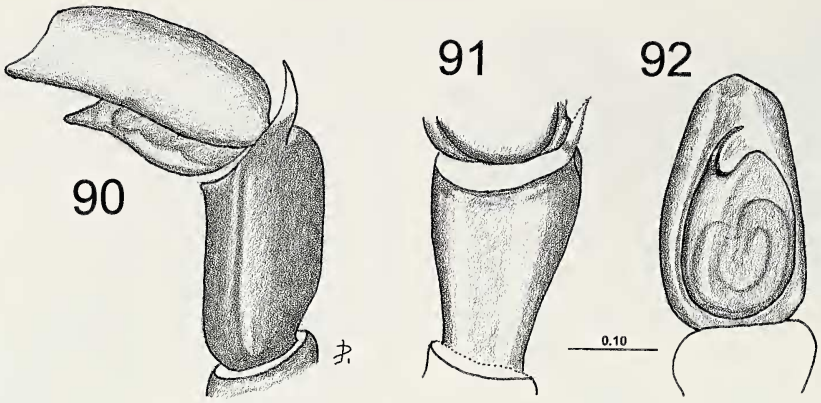
Figures 86–89.—***Sobasina cutleri*** new species from Viti Levu, Fiji. 86, General appearance of male holotype, with arrow indicating long pedicel; 87, Internal structure of epigynum showing right spermatheca and non-moniliform duct; 88, Palp of holotype, ventrally; 89, Palp of holotype, laterally.

Etymology.—This species is named for Dr. Bruce Cutler of the University of Kansas in Lawrence, Kansas, in recognition of his work in the family Salticidae.

Diagnosis.—No fringe of flattened setae on tibia I, ventral spines of tibia I in two rows of 5 to 6 spines each, eye region and sides of thoracic region with conspicuous punctures, pedicel long (Fig. 86). No other species of the genus fits this description. Internal structure of epigynum (Fig. 87) without moniliform spermatheca. Embolus, anterior shoulder of bulb and tibial apophysis (Figs. 88, 89) somewhat longer than in other species except for *S. solomonensis* and *S. platypoda,* which are distinguished by non-genitalic characters cited above.

Description.—*Male:* (n = 2). Total length 3.9, 4.0, length of carapace 1.9, 2.1, maximum carapace width 1.0, 1.2, eye field length 1.1, 1.2, eye row I width 0.9, 1.1. Cephalothorax dark brown, punctate all over, except top of the thoracic protuberance, PLE on protuberances, much higher above the dorsum and sides of cephalothorax than in other species. Petiole with long anterior sclerite, posterior sclerite not visible. Abdomen elongate, in male without constriction, the anterior part forming an indistinct, rounded bulge; light greyish-brown, with weak traces of lighter diagonal lines in the posterior half. Pedipalps chestnut brown, with patella lighter, narrow and slender. In ventral aspect, mouth parts, sternum and coxa IV brown, remaining coxae and trochanters yellow, abdomen anteriorly brownish-grey, behind epigastric fold pale yellow, framed with dark grey, yellow punctate sides, spinnerets grey. *Legs:* Leg I brown and longer than others, femur I with trochanter and coxa elongated, femur I broader and darker than remaining segments, tibia I cylindrical with five pairs of ventral spines; remaining legs slender and yellow, tibia II with 1–0 retroventral ventral spines. Leg formula 1–4–3–2, patella-tibia III<IV. Patella-tibia I length 1.5, 1.8. *Palp:* (Figs. 88, 89). Palp with embolus longer than in other species, anterolateral projection of bulb reaching near end of embolus, tibial apophysis long. In these features resembling *S. solomonensis* and *S. platypoda,* from which it differs by non-genitalic characters.

Female: (n = 5). Total length 3.1–5.0 ($\bar{x}$ = 4.27), length of carapace 1.4–2.3 ($\bar{x}$ = 1.97), maximum carapace width 0.5–1.1 ($\bar{x}$ = 0.98), eye field length 0.9–1.3 ($\bar{x}$ = 1.17), eye row I width 0.5–1.1 ($\bar{x}$ = 0.93). Sexes very similar. Abdomen with traces of constriction and of



Figures 90–92.—***Sobasina aspinosa*** new species from Vanua Levu, Fiji, holotype male. 90, Palp laterally; 91, Palpal tibia ventrally; 92, Cymbium and bulb ventrally.

dark coloration, on sides horizontal dark grey lines separated by thinner light ones. Pedipalps as brown as femur I, much darker than tibia I dorsally. *Legs:* Patella-tibia I length 0.9–1.7 ($\bar{x}$ = 1.21). Legs comparable with male, but legs II-IV appear darker. Leg formula 4–1–3–2, patella-tibia III<IV. *Epigynum:* A membranous opening leading almost directly to spherical spermathecal chamber, from which branches a large triangular structure. Posterior part of spermatheca duct-like, doubly curved, but otherwise much simpler than in other species (Fig. 87).

Material examined.—**FIJI**: *Viti Levu,* Nandarivatu, 870 m., 1♂ (holotype), 9 January 1987 (N.I. Platnick) (AMNH). Nandarivatu, Loma Lagi trail, in litter, 1♂, 15 April 1987 (JAB). Nandarivatu, 1100 m, 1♀ 1imm, 23 December 1963 (J.L. Gressit) (BPBM). Nandarivatu, 1♀ 1imm, 1 September 1938 (E.C. Zimmerman) (BPBM). Nandarivatu, 2♀ 3imm, 10 September 1938 (E.C. Zimmerman) (BPBM). Nausori highlands, 500–700 m, 3♀, November 1976 (N.L.H. Krauss). *Ovalau,* Wai-niloka, 1♀, 11 July 1938 (Z-47) (BPBM).

Distribution.—Known only from Viti Levu and Ovalau Islands, Fiji.

Sobasina aspinosa new species
Figs. 90–92, Map 4

Holotype.—Male from Fiji, Vanua Levu, Malaise trap, G.A. Samuelson, 1979 (BPBM).

Etymology.—The name *aspinosa,* spineless, refers to the absence of spines from the legs of this species.

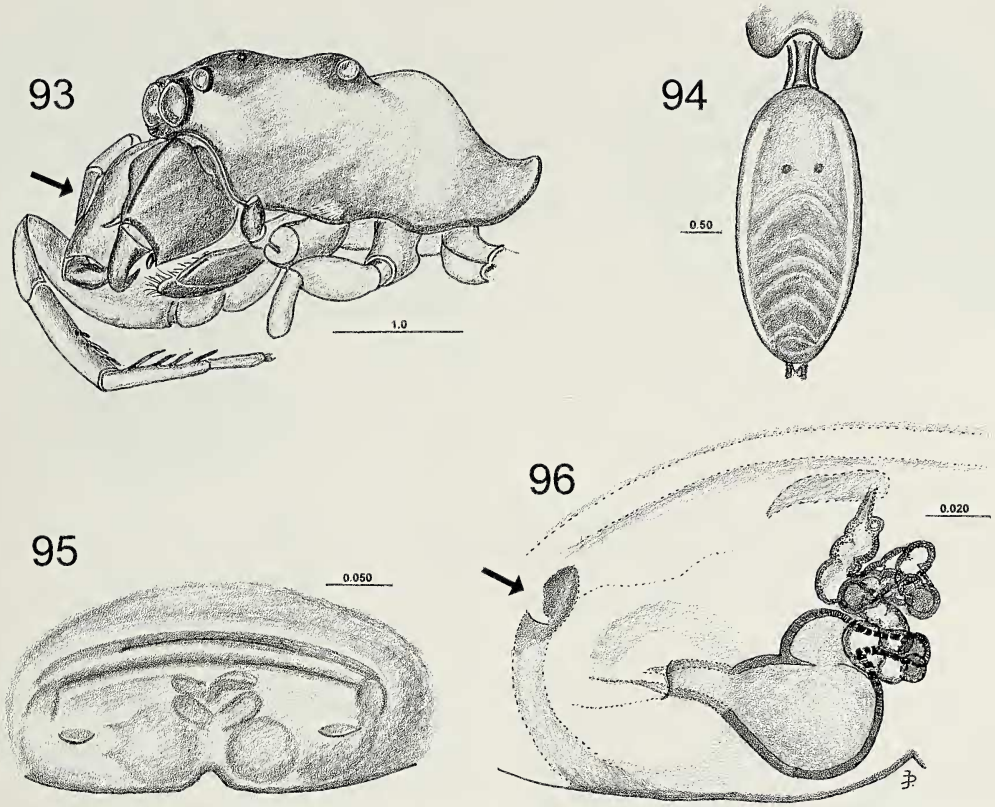
Diagnosis.—Tibia I very thin and long, legs without any spines, pedicel very long; eye field finely rugose, punctures along sides of thoracic region, single row of distinctly larger punctures along ventral edge of cephalothorax.

Description.—*Male:* (n = 2). Total length 3.9, 4.0; length of carapace 1.9, 2.0; maximum carapace width 0.9, 1.0; eye field length 0.9, 1.0; eye row I width 0.9, 0.9. Eye field dark brown, very finely rugose, same as sides below anterior eyes; rows of minute punctures along lower sides of thoracic region, a single row of distinctly larger punctures along ventral edge of cephalothorax; a few minute white setae on cephalothorax are slightly broadened. A patch of white adpressed setae located above base of coxa I. Abdomen covered by uniform dark, hard, shiny scutum, with distinct traces of constriction and a lateral patch of white setae. Frontal aspect dark brown, chelicerae broad and robust. *Legs:* Legs totally without spines, very thin; the retrolateral surface of femur I and both lateral surfaces of remaining segments of leg I darker, their ventral and dorsal surfaces much lighter. Leg formula 1–4–3–2, patella-tibia III<IV. Patella-tibia I length 1.2, 1.3. *Palp:* Broader, more robust than in remaining species (Figs. 90–92).

Female: The female is unknown.

Material examined.—**FIJI**: *Viti Levu,* Namosi road, 7.7 km N of Queen's Road, roadside sweeping & shaking, 1♂, 7 May 1987 (JWB, ERB & JAB). *Vanua Levu,* Malaise trap, 1♂ (holotype), G.A.S., 1979, 221 (BPBM).

Distribution.—The islands of Viti Levu and Vanua Levu, Fiji.



Figures 93–96.—***Sobasina magna*** new species from Eua, Tonga, holotype female. 93, Lateral view of female cephalothorax, with arrow indicating swollen, triangular chelicerae with prominent sclerotized external angles; 94, Abdominal pattern of female; 95, Epigynum; 96, Internal structure of epigynum showing right spermatheca and duct, with arrow showing dark oval structures without visible connection to internal structures.

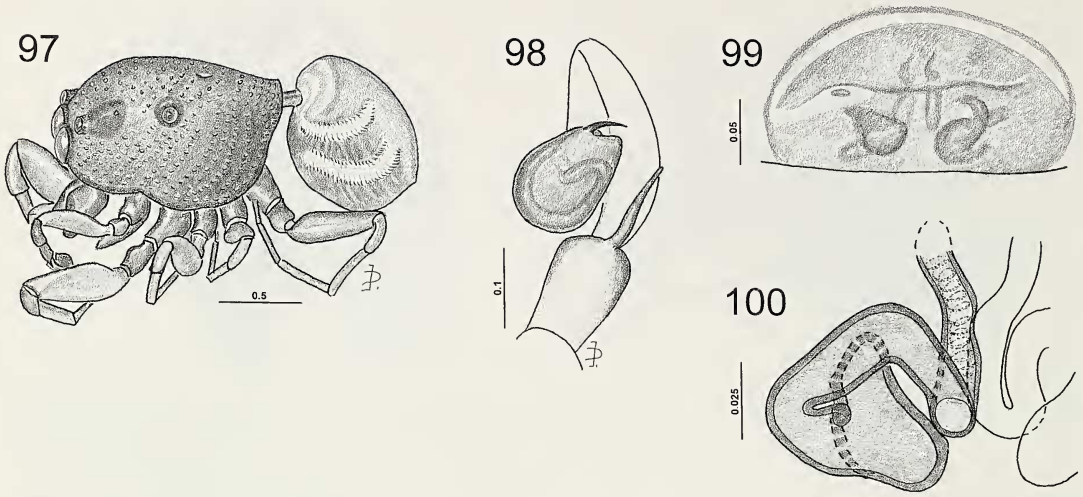
Sobasina magna new species
Figs. 93–96, Map 4

Holotype.—Female from Tonga, Eua, 0–100 m, 1979 (N.L.H. Krauss) (BPBM).

Etymology.—The name *magna,* large, is in reference to the fact that this is the largest species of *Sobasina* thus far known.

Diagnosis.—Large (7.1 mm) and broad, cephalothorax constricted, but the abdomen not; chelicerae large, swollen and diverging, with prominent, sclerotized angles and a huge promarginal tooth, retromargin with one large apical and a small bicusp basal tooth. Tibia I cylindrical and long, with spines smaller than in other species and located ventrally in the apical half, two retrolateral and three prolateral. Epigynum very small, its internal structure as in Figs. 95, 96.

Description.—*Female:* (n = 1). Total length 7.1, length of carapace 3.0, maximum carapace width 1.8, eye field length 1.5, eye row I width 1.4. Cephalothorax anteriorly dark brown with black around lateral and anterior eyes, posteriorly lighter, fawn, with thoracic swelling almost yellow. Anterior part of eye field covered with semicircular papillae, each bearing a minute whitish seta; posteriorly surface is rough but without regular papillae, thoracic swelling smooth. A distinct dorsal thoracic swelling behind eye field, separated by shallow lateral grooves, but no dorsal groove (Fig. 93). Lower sides dark brown, with a small, triangular patch of adpressed white setae above coxa I. *Chelicerae*: Large, swollen, triangular, diverging, dark brown, with external angles prominent and sclerotized. One bicusp retromarginal cheliceral tooth, and an additional rounded tooth at base of fang, two promarginal cheliceral teeth, one greatly enlarged. Face dark, with eyes sur-



Figures 97–100.—***Sobasina paradoxa*** new species from Viti Levu, Fiji. 97, General appearance of male; 98, Ventral-lateral view of palp (somewhat foreshortened) with bulb expanded; 99, Epigynum; 100, Internal structure of epigynum, ventral view. (Drawn from specimens from Mt. Tomanivi.)

rounded by sparse inconspicuous setae, clypeus very low, no contrasting marks. Pedipalp yellow, with tibia brown, tarsus missing. Mouth parts dark brown, sternum brown with darker margins. Abdomen not ant-like in character; elongate, oval, narrowing posteriorly, greyish-fawn with white marginal streaks and indistinct lighter dorsal chevrons (Fig. 94). Abdomen greyish ventrally. *Legs:* Legs relatively slender, almost without spines. Coxae I–III yellow, coxae IV brown; yellow except femur I brown, and darkened lateral surfaces of patella, tibia and metatarsus I. Tibia I peculiar by limitation of spines to its apical half; tibia cylindrical, thin and long; spines relatively smaller than in other species. Metatarsus I with three pairs of ventral spines, evenly distributed. Leg formula 1–4–2–3, patella-tibia III<IV. Patella-tibia I length 2.2. *Epigynum:* Very small, transversely oval, with indistinct transverse anterior groove (Fig. 95); two darker oval structures laterally, with small openings but without visible connection with internal structures. Openings lateral, very indistinct, apparently membranous, short, soft-walled duct leads to spherical spermathecae, extended by a narrow duct, making a series of complicated loops, forming a tightly entangled knot medially and anteriorly to spherical chamber.

Male: The male is unknown.

Material examined.—Only the holotype.

Distribution.—Known only from the type locality in Tonga.

Sobasina paradoxa new species
Figs. 97–100, Map 4

Holotype.—Male from Fiji, Viti Levu, Nandarivatu, 3700 ft., 9 October 1938 (E.C. Zimmerman) (BPBM).

Etymology.—The name *paradoxa* is based on the unusual body form of the species, as compared with other members of the genus.

Discussion.—This species is so different in body form from all other species of the genus that its placement in *Sobasina* may be questioned, but if the genitalia are considered of prime importance in defining salticid genera, regardless of somatic differences, then *Sobasina* is the proper genus. The simplicity of the genitalia may make reliance on them unwise, however. Rather similar male palps occur in the genera *Hasarius, Heratemis, Rogmocrypta, Simaetha* and probably others. Given our state of knowledge of salticids in general we conclude that relying first on the genitalia is the best course for the present.

Diagnosis.—Somewhat beetle-like, resembling *Coccorchestes* by very strongly sclerotized tegument of cephalothorax, with rows of circular punctures which cover the entire car-

apace (Fig. 97); differs by absence of crenellated shelf at posterior cephalothorax, with posterior edge coming below anterior abdomen. Entire carapace punctured. Pedicel hidden beneath abdomen. Constrictions absent from both cephalothorax and abdomen. Tibia I without fringe of setae.

Description.—*Male: (n = 5).* Total length 2.2–2.4 ($\bar{x}$ = 2.3), length of carapace 1.3–1.4 ($\bar{x}$ = 1.36), maximum carapace width 0.95–1.0 ($\bar{x}$ = 0.97), eye field length 0.65–0.80 ($\bar{x}$ = 0.75), eye row I width 0.75–0.85 ($\bar{x}$ = 0.81). Cephalothorax with prominent, steep anterior slope of the eye field between ALE; ALE are located distinctly above AME. Dorsum levels at about the second eye row and continues flat from there back, narrowing posteriorly but without any dorsal constriction or depression; tegument of cephalothorax strongly sclerotized, with rows of circular pits. Pedicel arises from cephalothorax very dorsally. Abdomen oval, broad, slightly flattened, without any traces of constriction, either dorsal or lateral. Two diagonal rows of whitish scales along anterior part of sides of abdomen. *Legs:* Leg formula 1–4–2–3; patella-tibia III<IV. Spination, tibia I 3–3 ventral; metatarsus I 3–3, tibia II ventral, none; metatarsus II ventral 1–0. No other leg spines. *Palp:* Bulb and embolus as in *S. platypoda* and *S. aspinosa*; tibial apophysis longer than in those species (Fig. 98).

Female: (*n* = 3). Total length 2.1–3.0 ($\bar{x}$ = 2.7), length of carapace 1.2–1.6 ($\bar{x}$ = 1.5), maximum carapace width 0.9–1.2 ($\bar{x}$ = 1.06), eye field length 0.7–1.0 ($\bar{x}$ = 0.86), eye row I width 0.7–0.9 ($\bar{x}$ = 0.86). Cephalothorax as in male except for ALE located slightly above AME. Abdomen as in male. *Legs:* Leg formula 4–1–2≃3; patella-tibia III<IV. Spination, tibia I 4–4 ventral; metatarsus I 3–3, tibia II ventral 1–0; metatarsus II ventral 2–0. No other leg spines. *Epigynum:* With transverse rim near middle of length; connecting ducts short and not highly convoluted, similar to *S. cutleri* (Figs. 99, 100).

Material examined.—Fiji, Viti Levu, Nandarivatu, 3700 ft., 6♂ (including holotype) 2♀ 3imm, 9 October 1938 (E.C. Zimmerman) (BPBM); Mt. Tomanivi (= Mt. Victoria), 1320 m., summit moss forest, moss litter, 4♂3♀ 5imm, 20 August 1978 (S. & J. Peck) (AMNH).

Map 5.—Distribution of five species of the new genus *Xenocytaea* in the Pacific. ***Xenocytaea triramosa*** new species (○), ***Xenocytaea zabkai*** new species (●), ***Xenocytaea daviesae*** new species (□), ***Xenocytaea maddisoni*** new species (■) and ***Xenocytaea anomala*** new species (★).

Distribution.—Known only from Viti Levu of the Fiji islands.

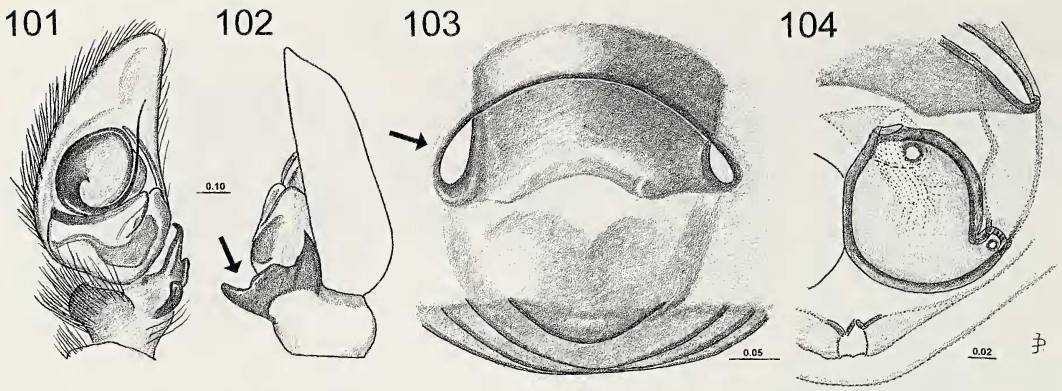
Genus *Xenocytaea* new genus
Figs. 101–121; Map 5

Type species.—***Xenocytaea triramosa*** new species, from Viti Levu, Fiji.

Etymology.—From Greek, *xeno,* strange or foreign, and the generic name, *Cytaea,* to indicate that, despite the similarity in male palpal structure, this group of species does not belong in *Cytaea.* The genus is feminine.

Discussion.—A survey of all 150 salticid genera known from Australia and the entire Pacific, exclusive of Japan and New Zealand, found only three genera that resemble *Xenocytaea*: *Chalcotropis, Donoessus* and *Panysinus.* With the exception of *Hasarius insularis* Keyserling 1881 from Tonga, now placed in *Chalcotropis,* these genera are not known from the area considered here. *Hasarius mccooki* Thorell 1892 may belong in this genus.

Diagnosis.—The cheliceral dentition (bicusp retromarginal tooth and two promarginal teeth), presence of lateral spines on patellae, tibiae and metatarsi, and ventral spination on tibia I, 2–2 or fewer (except in *X. anomala*) separate *Xenocytaea* from all other salticid genera of the entire Pacific except possibly *Chalcotropis* Simon 1902, *Donoessus* Simon



Figures 101–104.—***Xenocytaea triramosa*** new species from Viti Levu, Fiji. 101, Palp of holotype male, ventrally; 102, Palp of holotype male, laterally, with arrow indicating tripartite tibial apophysis; 103, Epigynum, with arrow indicating opening at edge of arch; 104, Internal structure of epigynum, showing left spermatheca and ducts.

1902 and *Panysinus* Simon 1901. From these genera it is distinguished (except *X. anomala*) by the epigynal arches (Figs. 103, 106, 110, 114), and absence of a conductor-like process from the male palp (Figs. 102, 108, 112).

Description.—Small fissident salticids with the retromarginal cheliceral tooth usually narrow and bifurcate, with two promarginal teeth. Female chelicerae brown, slightly bulging basally, rounded. With a lateral spine on each side on patellae III and IV, and a prolateral one on I or I and II. With 2–2 ventral spines on tibia I (3–3 in *anomala*) and at least some lateral spines on most or all tibiae and metatarsi. A dorsal spine near the base on tibiae III and IV.

Male palp resembling that of *Cytaea,* with the embolus forming a flat coil on the ventral surface of the bulb, making one or two counterclockwise turns, the bulb wide and often projecting beyond the cymbium. Epigyna (except *anomala*) with widely separated openings located under the ends of an anterior arch (Figs. 103, 106, 110, 114), the ducts short and little coiled. In three species (*zabkai, daviesae* and *maddisoni*) a posterior pocket present, also (Figs. 106, 110, 114). Epigynum of *anomala* somewhat resembling that of *Ascyltus* and some species of *Cytaea* (see Figs. 10, 11, 14, 19, 23, 28, 34).

Cephalothorax usually unicolorous in the male, never with the U-shaped light and dark bands characteristic of many *Cytaea.* Abdominal color pattern of females lacking the broad median longitudinal band of *Cytaea.*

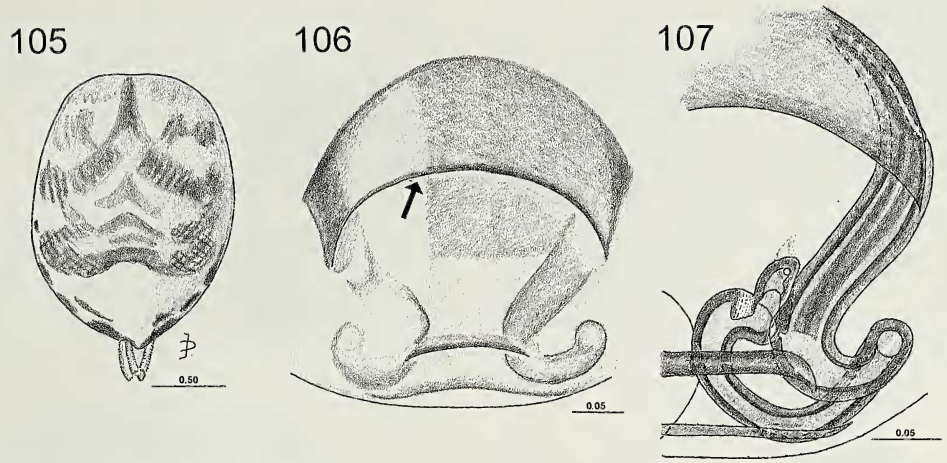
Xenocytaea triramosa new species
Figs. 101–104; Map 5

Holotype.—Holotype male from Fiji, Viti Levu, Nausori Dist., hill forest on Namosi Road about 7 km N of Queen's Road, 19 May 1987 (J.W. & E.R. Berry) (BPBM).

Etymology.—The specific name, *triramosa,* refers to the three-part retrolateral tibial apophysis of the male palp.

Diagnosis.—Broad flattened pedipalpal femur and patella and three-part tibial apophysis in male, and epigynum with openings not covered by arch, spermatheca globular, distinguish this species from the others of the genus.

Description.—*Male:* (n = 3). Total length 3.9–4.5 ($\bar{x}$ = 4.25), length of carapace 2.1–2.3 ($\bar{x}$ = 2.17), maximum carapace width 1.5–1.7 ($\bar{x}$ = 1.58), eye field length 1.1–1.2 ($\bar{x}$ = 1.17), eye row I width 1.45–1.50 ($\bar{x}$ = 1.48). Cephalothorax dark brown, eye field with white adpressed setae, a few orange setae around PLE; a few spots of white setae on sides of thoracic region. Frontal aspect light brown, with anterior eyes indistinctly surrounded with whitish setae, clypeus appearing bare. Chelicerae brown, the anterior surface depressed, making a triangular space along apical half of both chelicerae. Abdomen with marginal parts of dorsal surface greyish, median streak white, bisected anteromedially by darker line; two longer transverse white lines, the median connecting two small round spots, the posterior expanded diamond-shaped cen-



Figures 105–107.—***Xenocytaea zabkai*** new species from Viti Levu, Fiji, holotype female. 105, Abdominal pattern; 106, Epigynum, with arrow indicating copulatory openings hidden under arch; 107, Internal structure of epigynum, showing left spermatheca and ducts.

trally, between them a shorter white line. Leg I and pedipalps contrastingly colored blackish-brown and whitish. Dorsal surface of pedipalpal femur broad, flattened, shiny dark brown, bordered retrolaterally by a row of stiff black setae, basally by much longer white setae. Patella, tibia and cymbium dorsally broad and flattened, prolaterally black with long, black setae, contrasting with white dorsal surface of cymbium and parts of tibia and patella. *Legs:* Legs I blackened on prolateral half of dorsal surfaces of tibia and metatarsus I, these are also ornate with black ventral crests of long setae and a retrolateral row of white setae. Legs III-IV greyish-yellow, with tibiae II-IV slightly darker dorsally, ventral surfaces of tibiae II-III black; femora I-IV whitish, except ventral surface of femur II blackened. Leg formula 3–4–1=2; patella-tibia III≃IV. Patella-tibia I length 1.4–1.5 ($\bar{x}$ = 1.47). *Palp:* Embolus makes flat coil on the ventral, anterior surface of bulb; tibial apophysis tripartite, the lateral portions triangular, middle section truncate (Figs. 101, 102).

Female: (n = 1). Total length 5.6; length of carapace 2.5;, maximum carapace width 1.8, eye field length 1.3; eye row I width 1.7. Cephalothorax almost uniformly dark brown, eye field covered with white adpressed setae, a few orange setae below PLE. A few long upright bristles behind PLE, similar on eye field, becoming gradually lower anteriorly. Abdomen covered with minute dark setae and a few patches of minute white scales, traces of grey pattern with lighter median streak along posterior half and two transverse white lines, the median longer and the posterior shorter. Frontal aspect light brown, with anterior eyes indistinctly surrounded with whitish setae, clypeus yellowish, almost entirely bare with three curved bristles. *Legs:* Leg I and pedipalps with femora whitish, remaining segments slightly darker, with sparse short dark setae. Leg formula 4–3–1–2, patella-tibia III≃IV. Patella-tibia I length 1.5. *Epigynum:* Resembles that in *Xenocytaea daviesae* new species in having anterior transverse arch, but lacks the posterior pocket; copulatory opening at the end of arch and not hidden under it, spermathecae globular (Figs. 103, 104).

Material examined.—**FIJI**: *Viti Levu,* Namosi District, hill forest on Namosi Road, about 7 km N of Queen's Road, 1♂ (holotype), 19 May 1987 (JWB & ERB). Tholo-I-Suva Forest Park, sweeping & shaking trees, 2♂1♀, 6 May 1987 (ERB).

Distribution.—Known only from Viti Levu, Fiji.

Xenocytaea zabkai new species
Figs. 105–107; Map 5

Holotype.—Holotype female from Fiji, Viti Levu, hill forest about 8 miles NE of Navua, tree sweeping and shaking, 2 May 1987 (J.W. & E.R. Berry) (BPBM).

Etymology.—The specific name is after Marek Żabka, Zaklad Zoologi, Siedlce, Poland, author of a number of papers on Salticidae.

Diagnosis.—Epigynal arch deeply concave, its margin not sinuous, widely separated from posterior pocket (Fig. 106).

Description.—*Female:* (n = 1). Total length 3.7, length of carapace 1.7, maximum carapace width 1.3, eye field length 1.0, eye row I width 1.2. Cephalothorax uniformly brown with dark brown eye field and lighter spot behind, with a few indistinct whitish adpressed setae, a few orange setae below PLE. Frontal aspect yellow, with anterior eyes surrounded with distinct whitish setae, clypeus almost bare below AME but with three curved bristles, with sparse whitish setae below ALE. Labium and sternum brown, endites lighter brown, coxae whitish. Abdominal pattern resembling *Xenocytaea maddisoni,* but more variegated (Fig. 105), posterior white diamond-shaped area smaller. Abdomen whitish with grey spot in front of spinnerets; spinnerets yellowish-grey surrounded by black. *Legs:* Legs and pedipalps whitish, distal segments slightly darker, with sparse short dark setae. Leg formula 4–3–1=2; patella-tibia III=IV. Patella-tibia I length 1.0. *Epigynum:* Resembles *Xenocytaea daviesae* by anterior transverse arch, copulatory openings hidden under the arch, spermathecae duct-like and curved, but running different course than in other species (Figs. 106, 107).

Male: The male is unknown.

Material examined.—Only the holotype.

Distribution.—Known only from Viti Levu, Fiji.

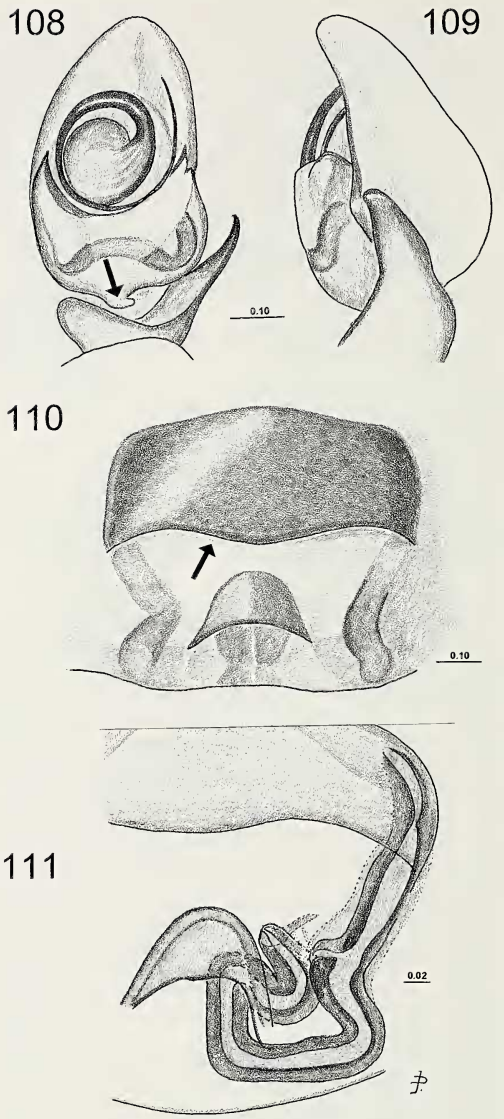
Xenocytaea daviesae new species
Figs. 108–111; Map 5

Holotype.—Holotype male from Fiji, Viti Levu, Nandarivatu, near swimming pool (stream) at Forestry Station, 14 May 1987 (J.W. & E.R. Berry) (BPBM).

Etymology.—The specific name, *daviesae,* is in honor of Valerie Todd Davies of the Queensland Museum, Australia, co-author of a major work on salticids of Australia (Davies & Żabka 1989).

Diagnosis.—The blunt hook on basal margin of male palpal bulb (Fig. 108) and the sinuous margin of the anterior epigynal arch (Fig. 110) distinguish *daviesae* from other species of the genus.

Description.—*Male:* (n = 1). Total length 3.2; length of carapace 2.1; maximum carapace width 1.3; eye field length 1.1; eye row I width 1.2. Frontal aspect light brown, with anterior eyes indistinctly surrounded with whitish setae, clypeus appearing bare. Chelicerae yellow, their anterior surface rounded. Pedipalps and metatarsus, tibia, patella and apical half of femur I dark olive grey, basal third of ventral surface of femur I whitish.



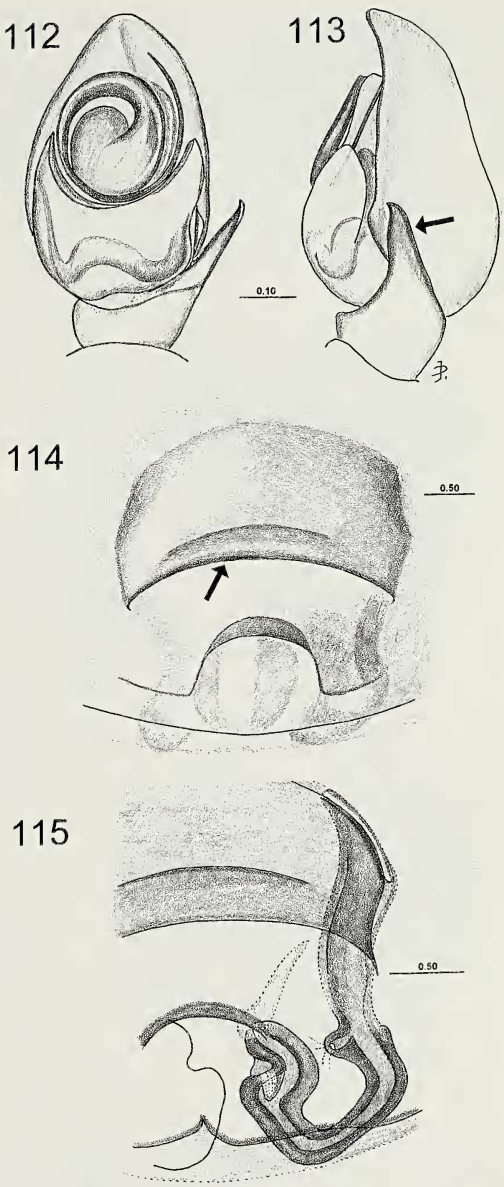
Figures 108–111.—***Xenocytaea daviesae*** new species from Viti Levu, Fiji. 108, Holotype male, palp ventrally, with arrow indicating blunt hook on base of bulb; 109, Holotype male, palp laterally; 110, Epigynum, with arrow indicating anterior epigynal arch; 111, Internal structure of epigynum, showing left spermatheca and ducts.

Cephalothorax almost uniformly brown, eye field with white adpressed setae, short group of whitish-orange setae stretches behind AME along ¼ of eye field; a few white setae behind PLE, and in semilunar transverse stripe across thoracic slope. Lower sides with sparse black setae. Abdomen greyish, with lighter spotted marginal parts of dorsal surface, white median streak, bisected antero-medially by darker line. *Legs:* Olive grey, legs I darker with basal half of femora, dorsal surfaces of patellae II-IV, and apical halves of tibiae II-IV whitish; metatarsi and tarsi I-IV yellowish. Retrolateral surface of tibia I densely covered with long, dark setae. Leg formula 4–3–1–2, patella-tibia III=IV. Patella-tibia I length 1.1. *Palp:* Embolus makes a flat coil on the ventral, anterior surface of bulb; apophysis single, long, laterally lobe-shaped (Figs. 108, 109).

Female: (n = 1). Total length 4.2; length of carapace 2.1; maximum carapace width 1.5; eye field length 1.1; eye row I width 1.4. Cephalothorax almost uniformly brown, eye field with white adpressed setae, orange setae around PLE; whitish setae on thoracic region, thin and sparse. Abdomen with minute dark setae and a few white setae denser along marginal belt. Frontal aspect light brown, with anterior eyes surrounded with distinct whitish setae, clypeus yellowish, with sparse white hairs and three curved bristles. *Legs:* Legs whitish, distal segments slightly darker, with sparse short dark setae. Leg formula 4–3–1–2, patella-tibia III = IV. Patella-tibia I length 1.1. *Epigynum:* With anterior arch and posterior pockets as in *Xenocytaea zabkai* and *maddisoni,* but with margin of arch sinuous; copulatory openings hidden under the arch, spermathecae duct-like and curved (Figs. 110, 111).

Material examined.—**FIJI**: *Viti Levu,* Nandarivatu near swimming pool at Forestry Station, 1♂ (holotype), 14 May 1987 (JWB & ERB). Nausori Highlands Forest Preserve, Leveitoko Block, elev. 1500 ft., shaking/picking. 1♀, 27 May 1987 (JWB & ERB).

Distribution.—Known only from Viti Levu, Fiji.



Figures 112–115.—***Xenocytaea maddisoni*** new species from Viti Levu, Fiji. 112, Holotype male, palp ventrally; 113, Holotype male, palp laterally, with arrow indicating the narrow unbranched tibial apophysis; 114, Epigynum, with arrow indicating the semicircular arch; 115, Internal structure of epigynum, showing left spermatheca and ducts.

Xenocytaea maddisoni new species
Figs. 112–115; Map 5

Holotype.—Holotype male from Fiji, Viti Levu, Nandarivatu, tree shaking in scrub, elev. 900 m, 11 April 1987 (J.W. & E.R. Berry (BPBM).

Etymology.—The specific name is after Wayne Maddison, of the University of Arizona, in recognition of his work on salticids.

Diagnosis.—The combination of the semi-

circular non-sinuous arch of the epigynum lying close to the posterior pocket (Fig. 114), the absence of a basal hook on the male palpal bulb, and the narrow unbranched palpal tibial apophysis (Figs. 112, 113) separates this species from the rest of the genus. Patella, tibia and basal half of cymbium of male palp white.

Description.—*Male:* (n = 4). Total length 3.4–3.5 ($\bar{x}$ = 3.43), length of carapace 1.67–1.73 ($\bar{x}$ = 1.72), maximum carapace width 1.2–1.3 ($\bar{x}$ = 1.27), eye field length 0.9–1.0 ($\bar{x}$ = 0.97), eye row I width 1.17–1.20 ($\bar{x}$ = 1.19). Cephalothorax almost uniformly brown, with thin white adpressed setae, a few orange setae at lower rims of PLE; eye field blackish-brown. A bare area above a marginal row of white setae along the edge of cephalothorax. Labium dark brown, endites yellow, sternum brown, coxae whitish. Chelicerae brown, their anterior surface rounded. Frontal aspect light brown, anterior eyes surrounded with whitish setae, clypeus with small whitish setae. Abdomen with greyish-white pattern of four marginal grey areas separated by small white spots; a thin, white marginal line; median white streak along anterior half with yellow central area, separated from posterior half by grey and white chevrons; posterior area white with two triangular grey marginal spots posteriorly. *Legs:* Prolateral surface of tibia I with two spines (only one retrolaterally). A grey line extends over prolateral surfaces of metatarsus, tibia and patella I, apically along ventral surface of femur I; legs otherwise whitish, with short, sparse dark setae. Leg formula 4–3–1–2; patella-tibia III = IV. Patella-tibia I length 1.0–1.2 ($\bar{x}$ = 1.08). *Palp:* Resembles in shape and proportions that in *Xenocytaea daviesae* new species, but differs (Figs. 112–113) by the absence of a basal hook on the bulb.

Female: (n = 1). Total length 4.2, length of carapace 1.9, maximum carapace width 1.4, eye field length 1.0, eye row I width 1.2. Cephalothorax almost uniformly brown with white adpressed setae, a few orange setae below PLE. Abdominal pattern somewhat resembles male, with a pair of dark grey marginal areas at midlength, delimiting median light grey area with two pairs of indistinct grey spots arranged in two incomplete chevrons; posterior half of abdomen is light diamond-shaped area, delimited by dark. Marginal broad band of anterior half of abdomen light, with sparse white scales. Labium dark brown, endites yellow, sternum brown, coxae whitish; abdomen whitish with large rectangular grey spot in the posterior half. Frontal aspect yellow, with anterior eyes surrounded with whitish setae, clypeus almost bare below AME but with three curved bristles, with sparse whitish setae under ALE. *Legs:* Legs (and pedipalps) whitish, distal segments slightly darker, with sparse short dark setae. Leg formula 4–3–1–2, patella-tibia III=IV. Patella-tibia I length 1.1. *Epigynum:* Resembling that in *Xenocytaea daviesae* new species by anterior transverse arch, copulatory openings hidden under the arch, spermathecae duct-like and curved (Figs. 114, 115).

Material examined.—**FIJI**: *Viti Levu,* Nandarivatu, tree shaking in scrub, elev. 900 m, 2♂ (including holotype) 1♀, 11 April 1987 (JWB & ERB). 22.4 km W of Suva City, forest sweeping & shaking, 1♂, 5 May 1987 (JWB & ERB). Namosi District, hilltop forest about 7 km N of Queen's Rd. on Namosi Road, 1♂, 19 May 1987 (JWB & ERB).

Distribution.—Known only from Fiji, Viti Levu.

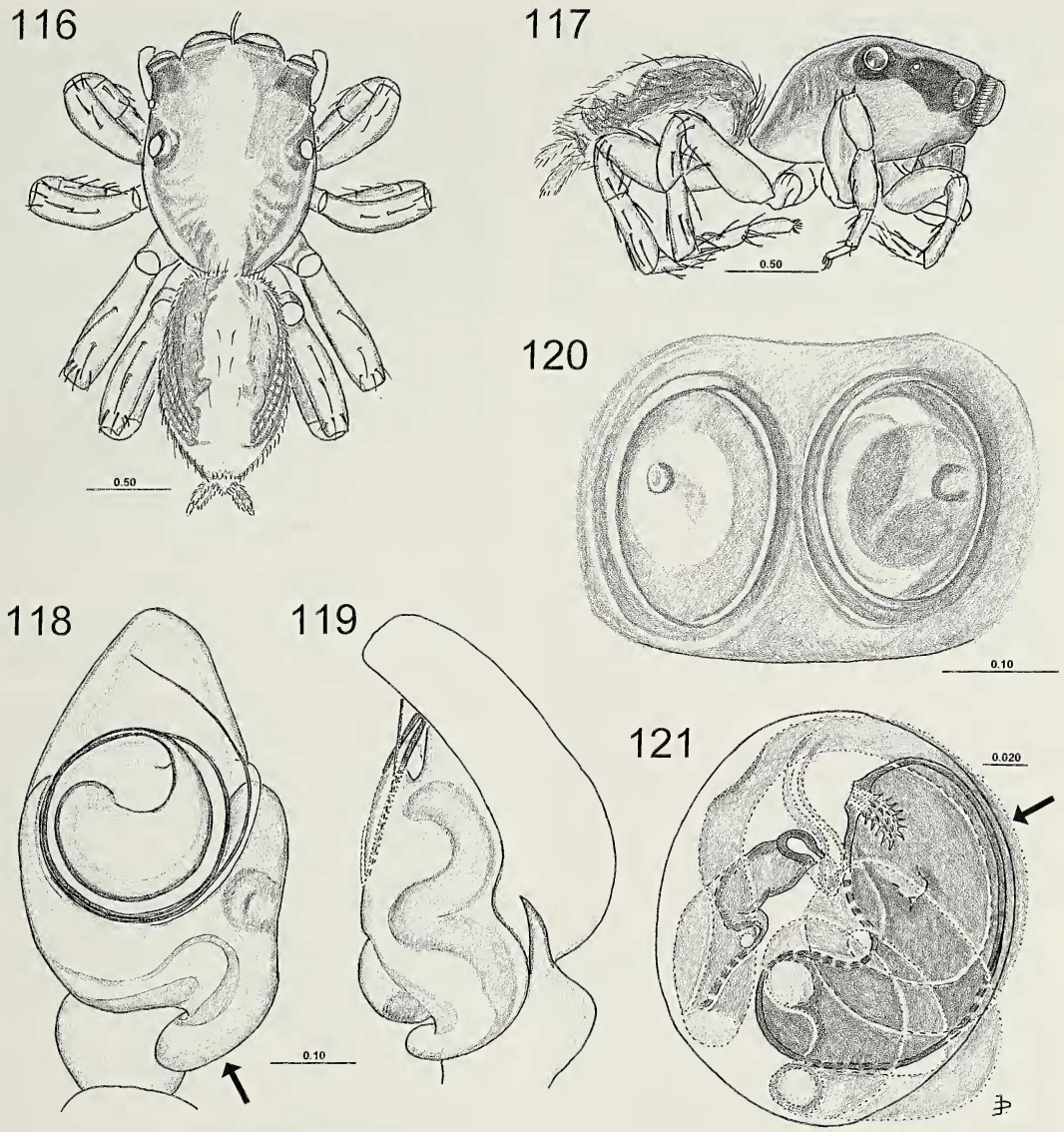
Xenocytaea anomala new species
Figs. 116–121, Map 5

Holotype.—Holotype male from Caroline Islands, Palau District, Pulo Anna Island, coconut litter, 7 April 1973 (J.W. & E.R. Berry) (BPBM).

Etymology.—The adjective *anomala* indicates the divergence of some characters of the species in comparison with others of the genus.

Diagnosis.—The epigynum differs from all other species of the genus by having large "windows," each spermatheca with ducts entirely framed by the "window" and lacking the arch and pocket. However, internal structures consist of similar elements as in the remaining species (Fig. 121). The extension of the palpal bulb beyond the cymbium retrolaterally and proximally (Figs. 118, 119) is distinctive.

Description.—General appearance of both sexes similar. Cephalothorax dark dorsally with distinct median streak of white adpressed setae, with indistinct darker lines radiating from the area of fovea; lower posterior sides pale yellow. Otherwise, eye field greyish-brown, covered with adpressed fawn setae; lower posterior sides pale yellow. Anterior eyes in a straight line. Anterior eyes surround-



Figures 116–121.—***Xenocytaea anomala*** new species from Pulo Anna, Caroline Islands. 116, Holotype male, general appearance of male; 117, Holotype male, lateral view; 118, Palp of holotype ventrally, with arrow indicating extension of palpal bulb; 119, Palp of holotype, laterally; 120, Epigynum; 121, Internal structure of epigynum, showing left spermatheca and ducts.

ed with inconspicuous whitish-to-yellowish setae; PLE surrounded by black, also black pigmented spot behind ALE. Clypeus reduced; dorsal half of face darker; single row of sparse white setae along edge of clypeus (Fig. 117). Chelicerae yellow, suffused greyish in the middle, apically whitish-yellow. Abdomen with a broad, white median streak (Fig. 116), in some specimens divided by small dark chevrons, followed laterally by greyish-brown areas; posterior part of abdomen and sides pale yellow, ventrally pale yellow. *Legs:* Pedipalps yellowish-white. Anterior legs pale yellow, with dorsal surfaces slightly darker fawn. Leg formula 4–3–1–2; patella-tibia III=IV. Patella-tibia I length: males, 0.7–0.9 ($\bar{x}$ = 0.78); females, 0.8–0.9 ($\bar{x}$ = 0.85).

Male: (n = 5). Total length 2.7–3.0 ($\bar{x}$ = 2.86), length of carapace 1.3–1.4 ($\bar{x}$ = 1.35), maximum carapace width 0.97–1.03 ($\bar{x}$ =

0.99), eye field length 0.7–0.8 ($\bar{x}$ = 0.71), eye row I width 1.00–1.03 ($\bar{x}$ = 1.02). *Palp:* Bulb extending laterally and proximally beyond cymbium, prolonged retrobasally into a blunt curved extension overlapping the tibia. Embolus coiled flat on bulb, making two turns (see Figs. 118, 119).

Female: (n = 5). Total length 3.0–3.7 ($\bar{x}$ = 3.41), length of carapace 1.3–1.6 ($\bar{x}$ = 1.45), maximum carapace width 1.0–1.2 ($\bar{x}$ = 1.10), eye field length 0.7–0.8 ($\bar{x}$ = 0.78), eye row I width 1.07–1.13 ($\bar{x}$ = 1.10). *Epigynum:* Lacking the arch found in the other members of the genus; with two oval windows separated by a narrow septum, coils of ducts lie entirely dorsal to windows (Figs. 120, 121).

Material examined.—CAROLINE ISLANDS: *Palau,* Pulo Anna, 2♂ (including holotype) 2♀, 7 April 1973 (JWB & ERB). Sonsorol Is., forest litter, 1♂1♀ 1imm, 6 April 1973 (JWB & ERB). Kayangel Atoll, mixed coconut/*Barringtonia,* tree shaking, 1♀, 22 April 1973 (JWB & ERB). Kayangel Atoll, in cycad tree, 1♂ 1imm, 22 April 1973 (JWB). Babelthuap Is., Ngaremlengui village, grass field, sweeping, 1♂ 1imm, 21 April 1973 (JWB & ERB). Peleliu, tree shaking, 4♂ 3imm, 21 March 1973 (JWB & ERB). Angaur Is., *Casuarina* litter, 1♀, 30 April 1973 (JWB & ERB).

Distribution.—Known only from the Palau District, western Caroline Islands.

ACKNOWLEDGMENTS

We are especially grateful for the Academic Research Grants from Butler University to JWB which helped support the field work and enabled JP to work on this project in the US. The US Department of Energy provided travel funds for the work at Eniwetok and Kwajalein in the Marshall Islands. Two travel grants from the Indiana Academy of Science to JWB helped support this work. A grant (#PB 0442/P2/93/04) from the Committee for Scientific Research in Poland helped support the work of JP. Elizabeth Ramsey Berry's contributions to all phases of the field work in the Pacific and at home have been invaluable. We are grateful to the staff of the Bishop Museum, Honolulu, for the loan of specimens and for assistance in many ways and to the American Museum of Natural History for the loan of specimens. We also wish to thank the staff of the Richard Gump Laboratory, Moorea, Society Islands; Dr. Madhu Kamath at the Forestry Station, Tholo-I-Suva, Drs. Kamlesh Kumar and Satya Ram Singh at the Koronivia Research Station in Fiji; Ozanne Rohi in Hiva Oa and the Forestry Department in Nuku Hiva (Marquesas Islands), Rick Welland in Rarotonga (Cook Islands), and Josie and David Sadaraka, Aitutaki (Cook Islands). Also, Sakie Morris, Demei Otobed and Rubak Obak in the Palau Islands provided valuable assistance. In the Yap Islands, Mel Lundgren, Gabriel Ayin, Sister Ann Dowling and Margie Falanruw contributed greatly to our work. The assistance of Dean Jamieson was valuable in finding good collecting sites in Hawaii. Without the cooperation of all of these people our field work would have been much less pleasant and effective. The comments of Robb Bennett, María Elena Galiano and Petra Sierwald were valuable in improving the manuscript.

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Manuscript received 20 April 1997, revised 8 December 1997.